Economic Data Collection Program

First Receiver and Shorebased Processor Report (2009-2016)

Melissa Krigbaum, Erin Steiner, Ashley Vizek, Jerry Leonard

National Marine Fisheries Service

Northwest Fisheries Science Center[1]

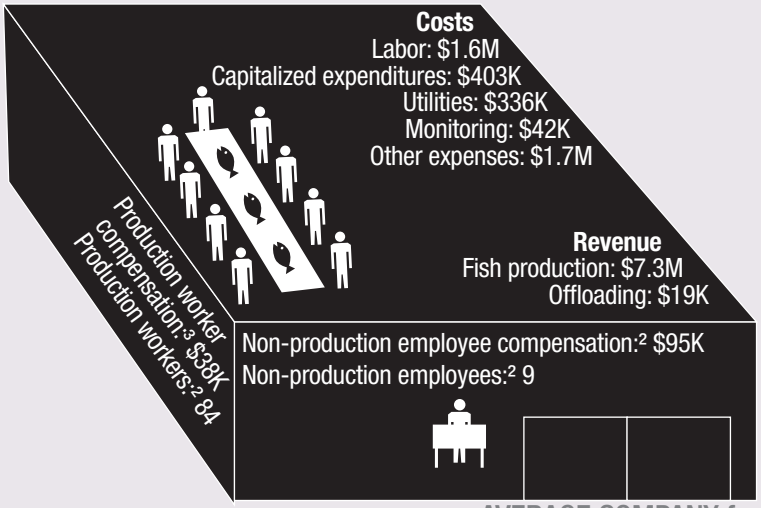
May 20, 2019

[1] For questions or comments, please contact the EDC Program at nwfsc.edc@noaa.gov.

2016 Economic Data Collection (EDC)

West Coast Groundfish Trawl Catch Share Program

FIRST RECEIVERS & SHOREBASED PROCESSORS

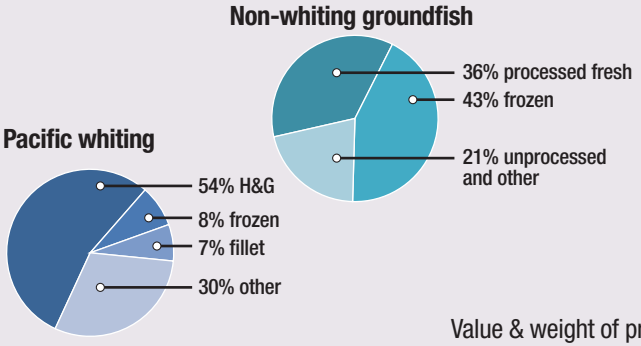


AVERAGE COMPANY for GROUNDFISH PRODUCTION

ECONOMIC SUMMARY[1]

Company Average
17 processors
$7.3M revenue
$6.7M variable costs
$0.6M variable cost net revenue
$759K fixed costs
$-155K total cost net revenue

INDUSTRY-WIDE PRODUCT TYPES



PRODUCTION

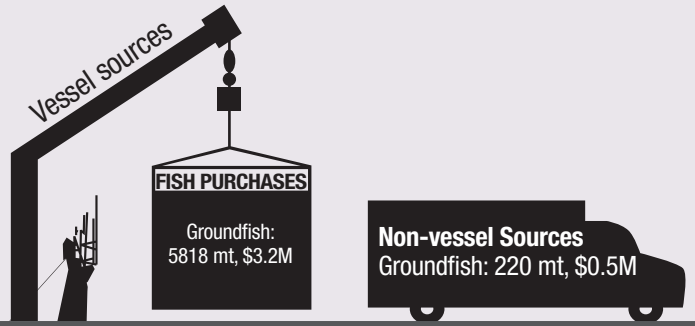
	N (companies)	Weight (1000 mt)	Value (millions)
Crab	15	9.0	$125
Shrimp	10	7.5	$52
Halibut	9	0.3	$5
Salmon	12	1.3	$15
Other	16	25.2	$55

SHORESIDE PROCESSING

Value & weight of processed groundfish
# of processing facilities

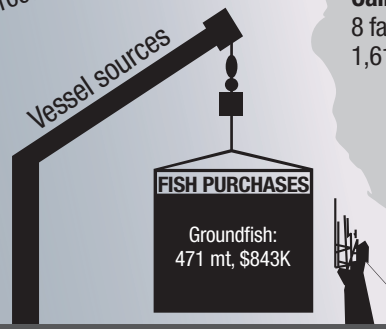
PROCESSORS

17 companies purchased & processed IFQ groundfish
21 processing facilities
10 buying stations



NON-PROCESSORS

4 companies purchased but did not process IFQ groundfish



Costs
Monitoring: $10.1K

[1]Note that some off-site costs are not collected. Therefore reported net revenue is an overestimate of actual net revenue.
[2]Employment information is for all operations (groundfish and other species).

www.nwfsc.noaa.gov/edc/reports

First Receiver and Shorebased Processor Sector: 2016 Highlights[1]

In 2016, there were a total of 21 catch share first receivers (companies[2] that purchased catch share groundfish), including 17 processors (purchased catch share groundfish and processed groundfish) and 4 non-processors (purchased catch share groundfish but did not process it).

- The sector generated $68.3 million in income and 959 jobs from handling and/or processing groundfish.
- Catch share first receivers received approximately 57% of all fish weight caught commercially on the West Coast in 2016, which was about 35% of the total value of all fish purchased.
- Processors employed the most production workers in the month of July, with an average of 101 workers per company, and the fewest in March, with an average of 50 workers per company. Companies had an average of 9 non-production employees.
- Average annual compensation for production workers employed by catch share processors was $38,500, representing a 21% increase from 2015 and 58% increase from 2009. Average annual compensation for non-production employees was $94,900, representing a 17% increase from 2015 and a 24% increase from 2009.
- Average revenue per catch share processor was approximately $22.3 million, the majority of which came from fish product sales (99.6%).
- Average total cost net revenue for all operations (catch share and non-catch share) was $0.8 million for catch share processors. Average variable cost net revenue was $2.6 million.
- For Pacific whiting production, average variable cost net revenue was $602 thousand, and average total cost net revenue was $-$440 thousand, a 52% increase from 2015, when total cost net revenue was at its lowest since 2009, possibly due to anomalous ocean conditions on the West Coast.
- For non-whiting groundfish production, average variable cost net revenue was $356 thousand, which represents a 37% decrease from the baseline period, and a 45% decrease from 2015. Average total cost net revenue was $70 thousand, which represents a 83% decrease from the baseline period, and a 84% decrease from 2015.

[1] Values reported in inflation-adjusted 2016 dollars. The pre-catch share baseline period is defined as the years 2009 and 2010.

[2] The unit of analysis is the first receiver site license owner, or "company." To maintain analytical consistency, reduce the reporting burden for participants, and protect confidential data, data are aggregated to the company level for businesses that own multiple facilities with first receiver site licenses.

Report Contents

Acknowledgments

The Economic Data Collection (EDC) Program and EDC Reports reflect collaboration and coordination of individuals across the West Coast. There are numerous people to thank for their contributions to this effort.

We would like to acknowledge the efforts of all the Northwest Fisheries Science Center (NWFSC) economists and NWFSC Fishery Resource Analysis and Monitoring Data Team who provided a wide range of input into survey design, implementation, analysis, and technical support. The group worked together in an effort to distribute high quality data in a timely fashion. A special thanks to Marie Guldin, Amanda Warlick, Todd Lee, Abigail Harley, and Lily Hsueh for assistance in the development of these reports. We thank Su Kim of the NWFSC Scientific Communications Office for producing the infographics in these reports.

We appreciate the efforts of the Northwest Regional Office for support in the EDC Program development, outreach, and communication efforts. The Permit Office staff was particularly instrumental in ensuring compliance with the mandatory participation requirements.

The Northwest Division of the Office of Law Enforcement (OLE) and the National Oceanic and Atmospheric Administration (NOAA) Office of General Council helped extensively with many aspects of the EDC Program development and enforcement. They continue to collaborate with the EDC Program to ensure compliance. We thank the NWFSC Scientific Data Management staff for building the administrative tracking system and database, and the NWFSC Fishery Resource Analysis and Monitoring Data Team for continued support.

We thank PacFIN and AKFIN staff for providing access to important landings, permit, and vessel data. The staff at ODFW, WDFW, and CDFW also contributed with data used for the fielding of the baseline data collection. Other data and assistance with data interpretation were provided by the At-sea Hake Observer Program and the West Coast Observer Program.

We thank the Pacific Fishery Management Council and advisory bodies for their valuable comments on the EDC reports and data.

Finally, we thank the members of the West Coast fishing industry who met with us to discuss the development and implementation of data collection processes. We appreciate the time and effort of each participant that will continue to help improve the program in the coming years.

Report Introduction

About the Report

The US West Coast groundfish fishery takes place off the coasts of Washington, Oregon and California, and comprises over 90 different species of fish. Fish are harvested both commercially and recreationally. The commercial fishery has four components: limited entry with a trawl endorsement, limited entry with a fixed gear endorsement, open access, and tribal. In January 2011, the West Coast Limited Entry groundfish trawl fishery transitioned to the West Coast groundfish trawl catch share program. The catch share program consists of cooperatives for the at-sea mothership (including catcher vessels and motherships) and catcher-processor fleets, and an individual fishing quota (IFQ) program for the shorebased trawl fleet.[3]

The Economic Data Collection (EDC) Program is a mandatory component of the West Coast groundfish trawl catch share program, collecting information annually from all catch share participants: catcher-processors, catcher vessels, motherships, first receivers, and shorebased processors. The EDC information is used to monitor the economic effects of the catch share program, and consists of data on operating costs, revenues, and vessel and processing facility characteristics.

This report summarizes information collected from the West Coast first receiver and shorebased processor sector. The EDC reports are also produced for the other sectors, and currently cover the years 2009 to 2016. The 2009 and 2010 data were collected in 2011 to provide a baseline of pre-catch share information. There is a one-year lag in collecting the EDC data to allow companies to close their accounting books. Thus, 2016 data were collected from May to September 2017. The EDC reports are updated annually to disseminate the data and contextualize its interpretation. The reports also serve as a catalyst for feedback on the data collected and its analysis. The scope of these reports continues to expand and the methods are refined with each publication.

The report is composed of three major sections. The first section, First Receiver and Shorebased Processor Overview (beginning on page 9), is an in-depth summary that contains descriptive analyses focusing on activities during 2016. The second section, First Receiver and Shorebased Processor Data Summaries (beginning on page 44), provides tables of all of the data collected from 2009 to 2016, with a detailed discussion of the methods used to summarize the data. The third section, First Receiver and Shorebased Processor Data Analysis (beginning on page 171), contains information about cost disaggregation and calculations of net revenue and economic performance. The data that form the basis for this report are confidential and must be aggregated or not shown so that individual responses are protected. More information about EDC Program administration, the EDC forms, data quality controls, data processing, and safeguarding confidential information can be found in the EDC Administration and

[3] Information about the Catch Share Program is available at http://www.westcoast.fisheries.noaa.gov/fisheries/groundfish_catch_shares/.

Operations Report.[4]

Background - Economic Data Collection and West Coast Groundfish Trawl Catch Share Program

The economic benefits of the West Coast groundfish trawl fishery and the distribution of these benefits were expected to change under the West Coast groundfish trawl catch share program. To monitor these changes, the Pacific Fishery Management Council (PFMC) proposed the implementation of the mandatory collection of economic data. Using data collected from industry participants, the EDC Program monitors whether the goals of the catch share program have been met.

Many of the PFMC's goals for the catch share program are economic in nature. These goals include: provide for a viable, profitable, and efficient groundfish fishery; increase operational flexibility; minimize adverse effects from an IFQ program on fishing communities and other fisheries to the extent practical; promote measurable economic and employment benefits through the harvesting, processing, distribution, and support sectors of the industry; provide quality product for the consumer; and, increase safety in the fishery.

The EDC Program is also intended to help meet the Magnuson-Stevens Fishery Conservation and Management Act (MSA) requirement to determine whether a catch share program is meeting its goals, and whether there are any necessary modifications of the program to meet those goals. The data submitted to and analyzed by the EDC Program were fundamental to the formal 5-year review of the catch share program required under the MSA, finalized in early 2018.

Monitoring the economic effects of a catch share program requires a variety of economic data and analyses. The primary effects of a catch share program can be captured in two broad types of economic analysis: 1) economic performance measures, and 2) regional economic impact analysis. Both of these require information on the costs and earnings of harvesters and processors.

Economic performance measures include: costs, earnings, and profitability (net revenue); economic efficiency; capacity measures; economic stability; net benefits to society; distribution of net benefits; product quality; functioning of the quota market; incentives to reduce bycatch; market power; and, spillover effects in other fisheries. Some of these measures are presented in this report, while others would require more specific and involved analysis using EDC data.

Regional economic impact analysis measures the effects of the program on regional economies. The catch share program will likely affect different regional economies in different ways. Regional economic modeling involves tracking the expenditures of all businesses, households, and institutions within a given geographic region to arrive at the effects on income and employment. On the West Coast, the Northwest

[4] Economic Data Collection Program, Administration and Operations Report available at: http://www.nwfsc.noaa.gov/edc.

Fishery Science Center's IO-PAC model[5] is used to estimate regional economic impacts using data from both the EDC survey forms and the voluntary cost earnings survey as model inputs.[6]

[5] Leonard, J., and P. Watson. 2011. Description of the input-output model for Pacific Coast fisheries. U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-111, 64 p.

[6] For more information on cost earnings survey data collection process, see the Administration and Operations Report Draft Report (May 2016).

OVERVIEW

Management Context

In January 2011, the West Coast Limited Entry Groundfish Trawl fishery transitioned to the West Coast Groundfish Trawl Catch Share Program. The catch share program consists of cooperatives for the at-sea mothership (including catcher vessels and motherships) and catcher-processor fleets, and an individual fishing quota (IFQ) program for the shorebased trawl fleet. The Shorebased IFQ Program allocated quota to permit owners for 30 different groundfish species and rockfish complexes, and individual bycatch quota for Pacific halibut, based on catch history.[1] Also, 20% of the shoreside Pacific whiting allocation was given to eligible shorebased processors. Eligibility and initial allocation percentage were determined by historical deliveries to shorebased processors from 1998 to 2004.[2] No quota allocation was given to processors for non-whiting catch share groundfish. While transfers of quota pounds (transferring quota for use in that year) began in 2011, there was a moratorium on transfers of quota share percentages (permanent transfers of allocation) until January 1, 2014.

Sector Description: First Receivers

A first receiver is defined by groundfish regulations (50 CFR 660.111) as "a person who receives, purchases, or takes custody, control, or possession of catch onshore directly from a vessel." Groundfish regulations (50 CFR 660.11) define a shorebased processor as a "a person, vessel, or facility that engages in commercial processing ... at a facility that is permanently fixed to land." With the implementation of the West Coast Groundfish Trawl Catch Share Program, federal regulations (50 CFR 660.25) mandate that a first receiver site license (FRSL) is required in order to receive fish harvested within the Shorebased IFQ Program.

In the first receiver and shorebased processor sector, 28 companies had FRSLs in 2016 (44 licenses in total, as some companies have multiple licenses), all of which submitted a complete EDC form. Of these, 21 companies across 35 facilities purchased groundfish caught in the catch share program. The first receiver and shorebased processor sector generated $68.3 million in income and 959 jobs from handling and/or processing groundfish [3]

[1] Pacific Coast Groundfish IFQ Database, https://www.webapps.nwfsc.noaa.gov/ifq/.

[2] National Marine Fisheries Service (NMFS), 2013. Pacific Coast groundfish FMP; Reconsideration of allocation of whiting, https://www.federalregister.gov/articles/2013/01/02/2012-31546/fisheries-off-west-coast-states-pacific-coast-groundfish-fishery-management-plan-trawl.

[3] Values calculated using the NWFSC IO-PAC model (Leonard, J., and P. Watson. 2011. Description of the inputoutput model for Pacific Coast fisheries. U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-111, 64 p.).

As the purpose of the EDC Program is to collect information to monitor the economic effects of the catch share program, this Overview examines those first receivers that purchased catch share groundfish, referred to as catch share first receivers. Thus, companies that had a FRSL but did not purchase catch share groundfish are excluded.[4] The unit of analysis is the FRSL owner, or "company." Owners of multiple FRSLs are required to submit a form for each site (facility). To maintain analytical consistency, reduce the reporting burden for participants, and protect confidential data, data are aggregated to the company level for businesses that own multiple facilities with FRSLs. All values reported here in the Overview are inflation-adjusted 2016 dollars.

Catch share first receivers received about 57% of all fish weight caught commercially on the West Coast in 2016, which was 35% of the total value of fish purchased (Figure 1). This included 91% of all groundfish and 62% of all shrimp purchased on the West Coast.

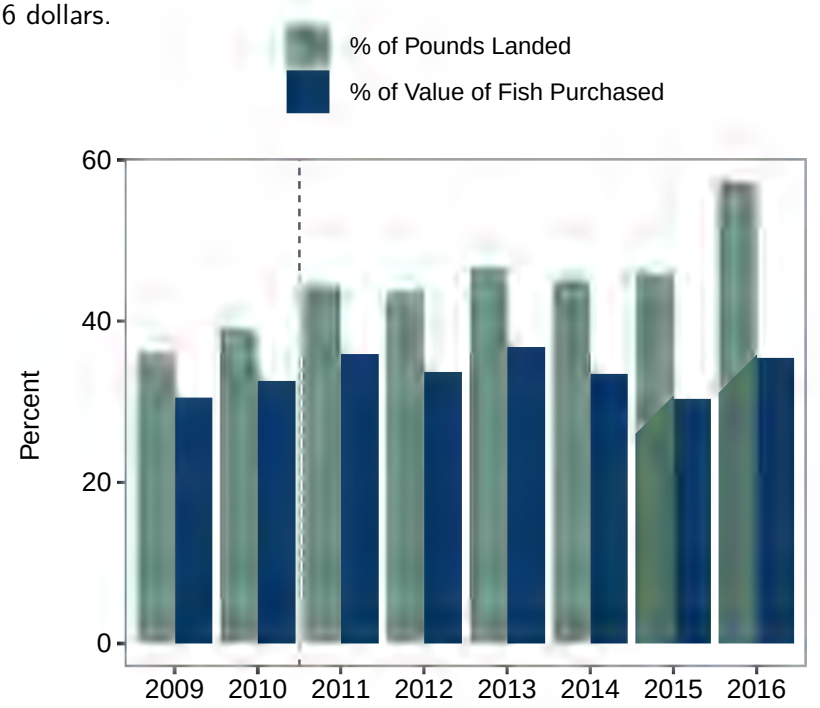


Figure 1: Percent of all West Coast shoreside commercially caught fish received by catch share first receivers. Dashed line represents the beginning of the catch share program.

In addition to groundfish, catch share first receivers' operations include other species. In 2016, over 30% of the weight and 70% of the value of fish purchased was from non-groundfish species, such as crab, shrimp, tuna, and sardines (Figure 2). These companies also purchase fish from non-vessel sources, which can include other first receivers, processors, wholesale dealers, brokers, tribes, and aquaculture producers. In 2016, 9% of all fish weight purchased, 4% of groundfish purchased, and 20% of other species purchased were from non-vessel sources.[5]

There are catch share first receiver facilities in all three states on the West Coast. In 2016, California had the most facilities (15), followed by Oregon (12 facilities) and Washington (4 facilities). Of these facilities, 21 purchase catch share groundfish, and cut or freeze one or more product (8 in California, 9 in Oregon, and 4 in Washington). In any given year, the volume and value of fish purchased and

[4] The values in the Data Summaries and Data Analysis sections include all companies that had a FRSL regardless of whether they used it to purchase catch share groundfish. See Figure 22 in the Data Summaries for more information.

[5] The information for non-vessel sources is reported for the 2016 fiscal year, as it is collected on the EDC forms. The remaining values in this section are reported for the 2016 calendar year as the information is gathered from PacFIN fish ticket data and the totals include non-EDC participants.

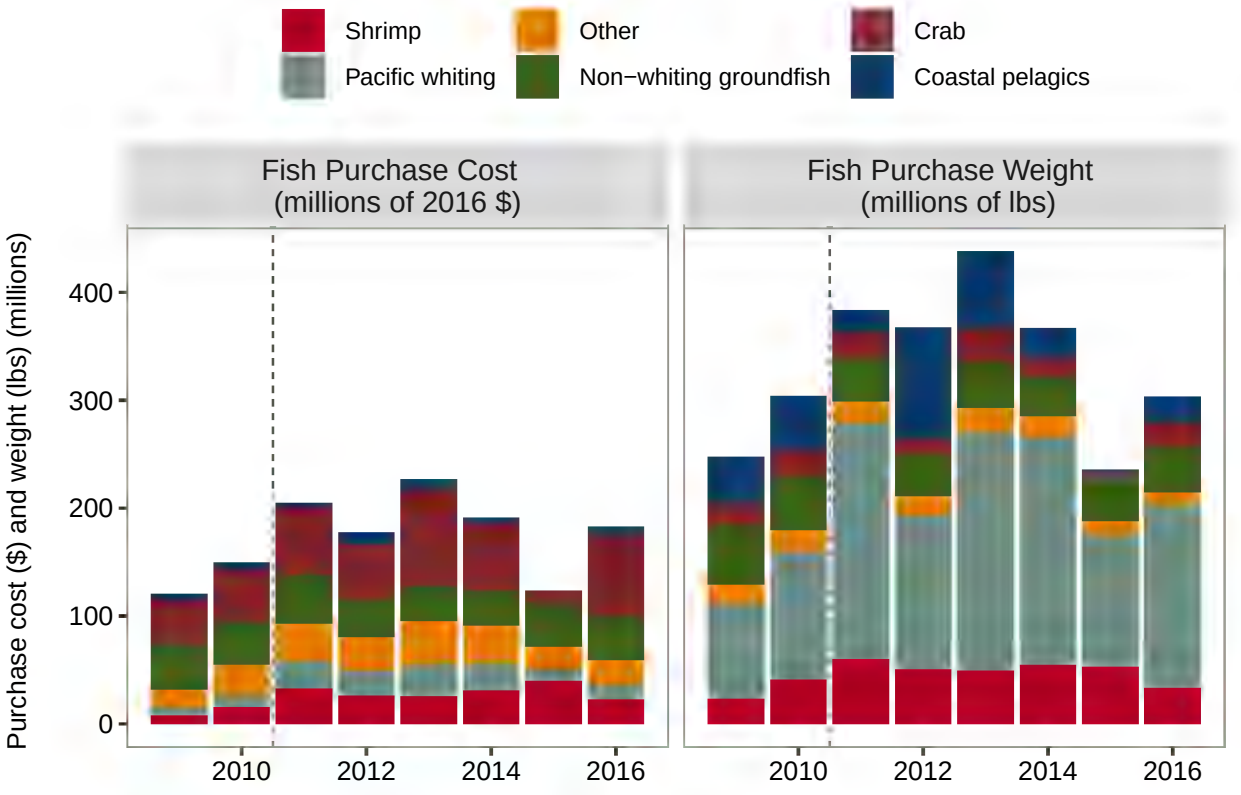


Figure 2: Total fish purchase cost (millions of 2016 $) (left) and purchase weight (millions of lbs) (right) by species group for catch share first receivers. Dashed line represents the beginning of the catch share program.

processed by first receivers is directly influenced by conditions on the fishing grounds and other factors impacting the quantity, timing, and location of vessel landings.

Table 1: Deliveries by port. Catch share first receivers total purchase cost, landings weight, and number of companies purchasing groundfish in 2016 (includes non-catch share groundfish). Some companies purchase fish in multiple ports, and each company is counted in every port where fish is purchased.

	Purchase Cost (millions of $)	Landings (millions of lbs)	Number of companies
Washington state	6.0	78.8	5
Astoria, Oregon	17.2	77.5	4
Newport, Oregon	11.3	61.0	4
Southern Oregon	4.7	6.2	4
Northern California	6.0	7.9	6
Morro Bay, Monterey, San Francisco, CA	1.8	1.0	5

Processors and Non-Processors

First receiver and shorebased processor operations range from independent catcher vessel owners who unload and truck their own fish, to large, multi-facility processing companies with a wide range of products. Due to the variety of operations, first receivers and shorebased processors that participated in the catch share program are separated into two categories:

- **Catch share processors**: companies that purchased catch share groundfish and processed groundfish.
- **Catch share non-processors**: companies that purchased catch share groundfish and did not process groundfish.

In 2016, there were 17 companies classified as catch share processors and 4 companies classified as catch share non-processors (Figure 3). Fifteen companies participated in 2009 and/or 2010 but did not participate under the catch share program (mostly non-processors). There have been six new participants that have joined since the start of the catch share program in 2011.

The EDC Program tracks economic indicators by compiling information submitted by catch share first receivers about expenses and revenue and how those figures change over time. Pre-catch share data for the 2009 and 2010 operating years were submitted in 2011 and have been averaged to calculate "baseline" conditions within the fishery to which subsequent years of data can be compared. EDC participants complete the form using information based on the fiscal year of the entity. Values reported in the remainder of this report are presented for fiscal year, and data assigned to a fiscal year may not overlap completely with the calendar year.

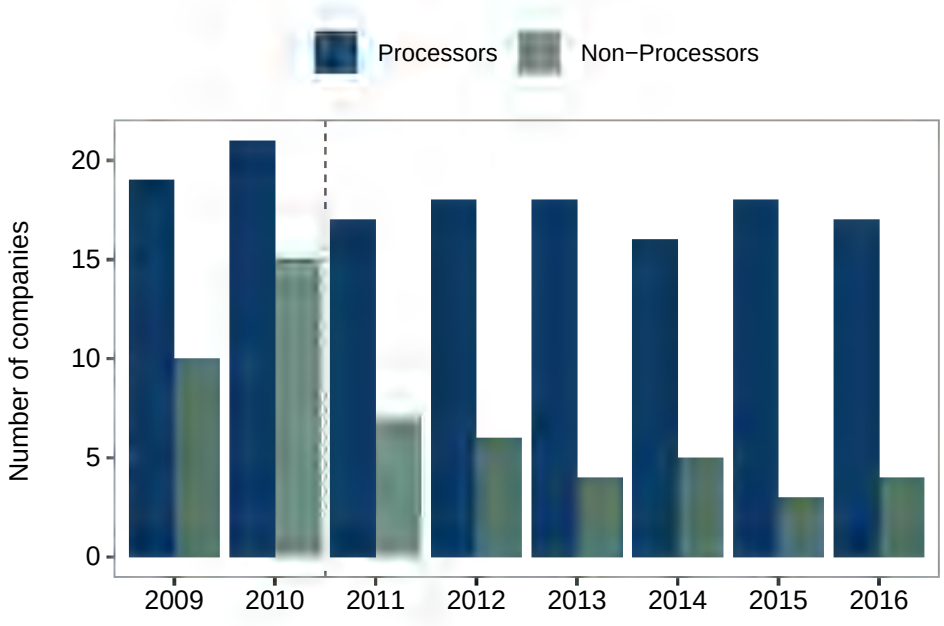


Figure 3: Number of companies characterized as catch share processors and non-processors. Dashed line represents the beginning of the catch share program.

Processors

The figures, tables, and discussion in this section of the Overview pertain only to catch share processors.[6]

Production Workers

The labor force of production workers at these companies fluctuates throughout the year due to fishing seasons and the portfolio of species being processed. Facilities employ more workers in months when purchase and production volumes are highest. Employment also increases during the winter months during crab season in some years (Figure 4). Production workers include on-site workers through the line-supervisor level who are engaged in processing, assembling, inspecting, packaging, maintenance, and similar activities.[7] In 2016, catch share processors employed the greatest number of production workers in the month of July, with 1,717 total workers across the sector and an average of 101 per company. The fewest production workers were employed in March, with 854 total workers across the sector and an average of 50 per company.Data suggest that the months of heaviest operations may be shifting to later in the calendar year, from June and July in 2009 to August and September in 2016. In addition to production workers, catch share processors have non-production employees, which include on-site supervisors and individuals responsible for sales, advertising, credit, collection, record keeping, and similar activities.[8] In 2016, these companies employed an average of 9 non-production employees per company. Generally, non-production employees are employed for the entire calendar year, while many production workers are employed seasonally. The average hourly compensation for production workers was $21.4 in 2016, a 41% increase compared to the baseline period. On an annual basis, production worker compensation per position was $38,500 in 2016, a 62% increase compared to the baseline period. The average hourly compensation for non-production employees was $50.23, an increase from $36.1 in the baseline period. Annual non-production employee compensation per position was $94,900 in 2016, a 24% increase from the baseline period and 16% increase from the average over the catch share period, prior to this year.

[6] See Figure 22 in the Data Summaries for more information.
[7] See Section 3.1 of the Data Summaries for more details.
[8] See Section 3.2 of the Data Summaries for more details.

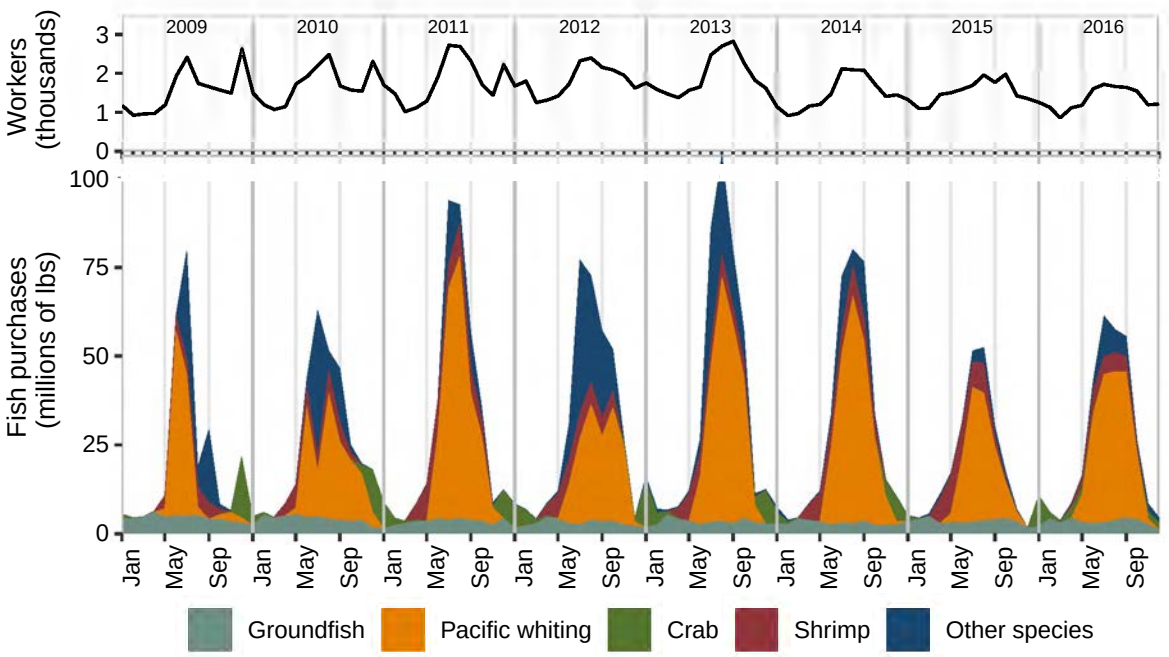


Figure 4: Number of production workers employed (thousands) (top) and total pounds purchased by catch share processors in each month by species group (millions of lbs) (bottom).

Regional Production

Catch share processors produce seafood products in facilities all along the West Coast, and the production value varies by state (Figure 5). Combined in Washington and Oregon, Pacific whiting was the largest component of production volume (95.9 million lbs), but crab was the largest component of production value ($73 million) followed by non-whiting groundfish ($56.9 million).

California generated the highest revenue ($33.6 million), and largest volume from crab production (5.2 million lbs). Non-whiting groundfish was the second largest component of production volume for California (3.6 million lbs.)

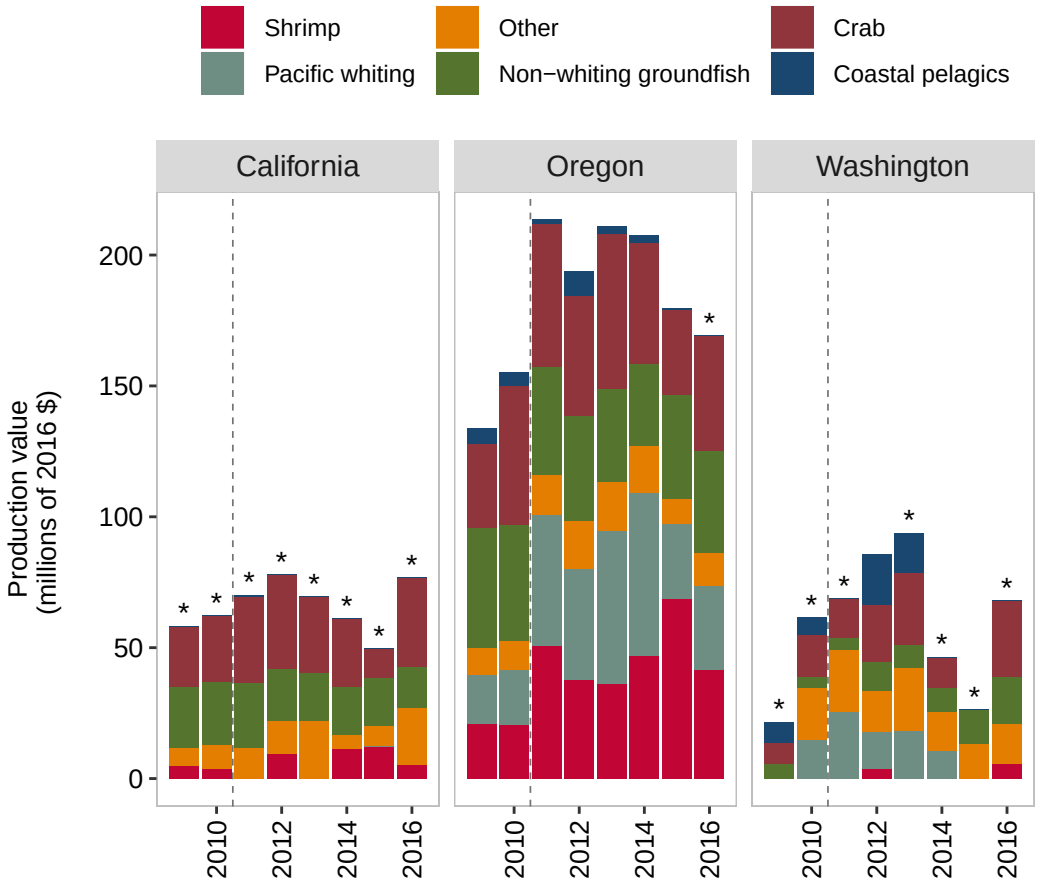


Figure 5: Total production value of fish produced by catch share processors in each state, excluding unprocessed fish (millions of 2016 $). *Some values are suppressed to protect confidential information. Dashed line represents the beginning of the catch share program.

Economic Indicators

Economic indicators for catch share processors are first presented for all operations (catch share and non-catch share), followed by analyses distinguishing between Pacific whiting production (page 21) and other groundfish species (page 26). Measures presented include revenue, variable costs, fixed costs, product types, markups, costs per output pound, variable cost net revenue (revenue less variable costs), and total cost net revenue (revenue less total costs).

Revenue

Catch share processor earnings come from fish sales, offloading revenue, custom processing revenue, and revenue from leasing or selling quota. Average revenue per company was approximately $22.3 million in 2016 (a 49% increase compared to the baseline period). In 2016, nearly all revenue was made up of fish product sales (99.6%).

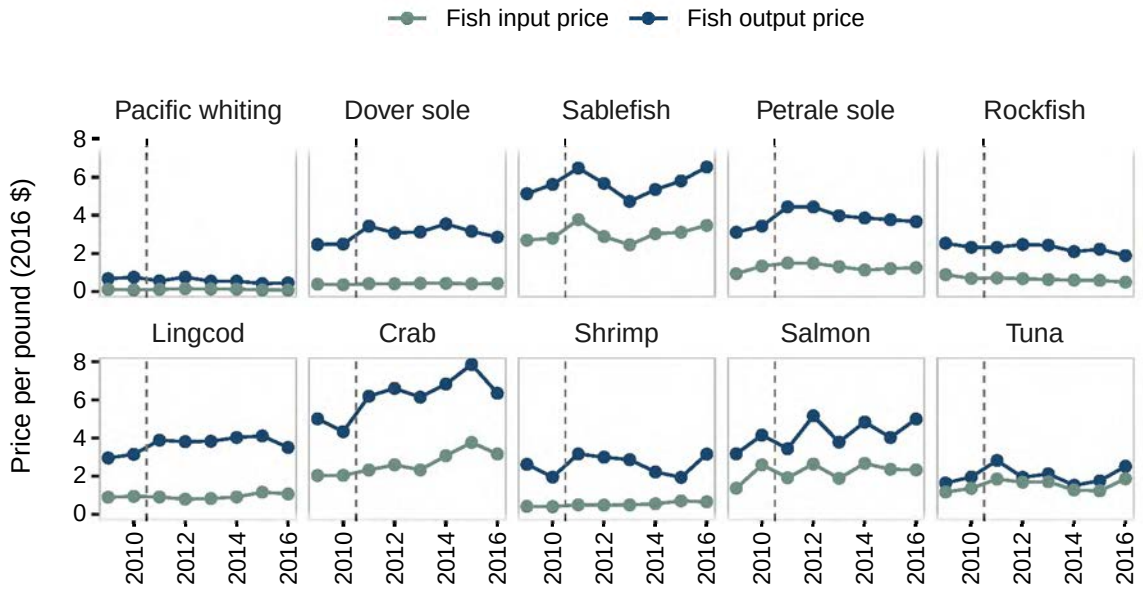


Figure 6: Industry average fish output and fish input prices for select species (2016 $). Dashed line represents the beginning of the catch share program.

The average fish output price (the ratio of annual production value to annual production weight) was higher than in the baseline period for all species except for Pacific whiting, rockfish and dover sole. The input price (the ratio of annual fish purchase cost to fish purchase weight, or the average price per pound first receivers pay to purchase each species) was higher than in the baseline period for all species except for Pacific whiting and rockfish.

Dover sole output prices were $2.85 in 2016, a 10% decrease from 2015 and the lowest price since the baseline period, when the price was $2.48. Dover sole input prices were $0.43 in 2016, a 7% increase from 2015 and a 16% increase from the baseline period.

In 2016, the input and output rockfish prices were the lowest since the beginning of the sample period at $0.49 and $1.88 respectively. This marks a 37% decrease in input price and a 22% decrease in output price from the baseline period.

Crab output prices were $6.34 in 2016, a 36% increase from the baseline period, but a 19% decrease from last year. Crab input prices were $3.17 in 2016, a 55% increase from the baseline period, but a 16% decrease from last year.

Lingcod output prices were $3.51 in 2016, a 15% increase from the baseline period, but a 15% decrease from last year. Lingcod input prices were $1.07 in 2016, a 16% increase from the baseline period, but an 8% decrease from last year.

In 2011, the Sablefish prices (input and output) increased to $3.77 and $6.48 respectively, but then decreased in 2012 to previous years' levels (Figure 6). Sablefish output price for 2016 rose to $6.54, the highest since 2011. The input price in 2016 also rose to $3.47, the highest since 2011.

Salmon output prices were $5 in 2016, the highest output price in the study period and a 36% increase

from the baseline period. Salmon input prices were $2.33 in 2016, a 18% increase from the baseline period, but a 1% decrease from last year.

Petrale output prices were $3.67, which remains higher than the baseline period (a 12% increase), but has declined each year since 2011 (Figure 6). Input prices for Petrale sole were $1.25, a 10% increase from the baseline period.

Shrimp output prices were $3.16 in 2016, the highest in the sample period, and a 38% increase from the baseline period. Shrimp input prices were $0.66, a 57% increase from the baseline period.

Tuna input and output prices were $1.87 and $2.52, respectively in 2016. The input prices were the highest in the sample period, and a 47% increase from the baseline period. The output prices were the highest since 2011, and a 40% increase from the baseline period.

Costs

Variable costs

Costs are separated into two categories: variable costs and fixed costs. Variable costs comprise the majority of a catch share processor's total expenditures (91% in 2016) and include items such as fish purchases, additives, labor, and utilities. Variable costs vary with the level of fish production and averaged approximately $19.7 million per company in 2016, a 64% increase compared to the pre-catch share baseline period. Variable costs per output pound were $3.22 in 2016, a 56% increase compared to the baseline period. The largest expense was the cost of fish purchases, primarily from vessels but also from other fish buyers, which amounted to an average of 66% of variable costs in 2016. The next largest expense categories for catch share processors were labor (20% of costs) and equipment (5%), (Figure 7). Average labor expenses have increased since the implementation of the catch share program, likely due, in part, to an increase in fish production, and in part to the increasing use of employment agencies to fill production worker positions. Average expenses on utilities, freight, monitoring and off-site product freezing and storage have also gradually increased since the baseline period.

Monitoring costs were approximately $42,000 per company in 2016 and include shoreside catch monitors who ensure that total landings are accurately sorted, weighed, and recorded on fish tickets. Since the implementation of the catch share program in 2011, catch monitors have been required for deliveries of Pacific whiting and non-whiting groundfish.[9] In 2011 and 2012, the cost of catch monitors was subsidized at $41 per hour with a maximum of $328 per day. This subsidy decreased to $27 per hour and $216 per day in 2014, and $108 per day in 2015. In 2016, the first receivers were required to pay full cost of monitoring.

Fixed costs

[9] In 2008, there was partial catch monitor coverage of Pacific whiting deliveries, which was paid for by industry. In 2009 and 2010, all deliveries of Pacific whiting to a shorebased first receiver were verified by catch monitors, funded entirely by industry.

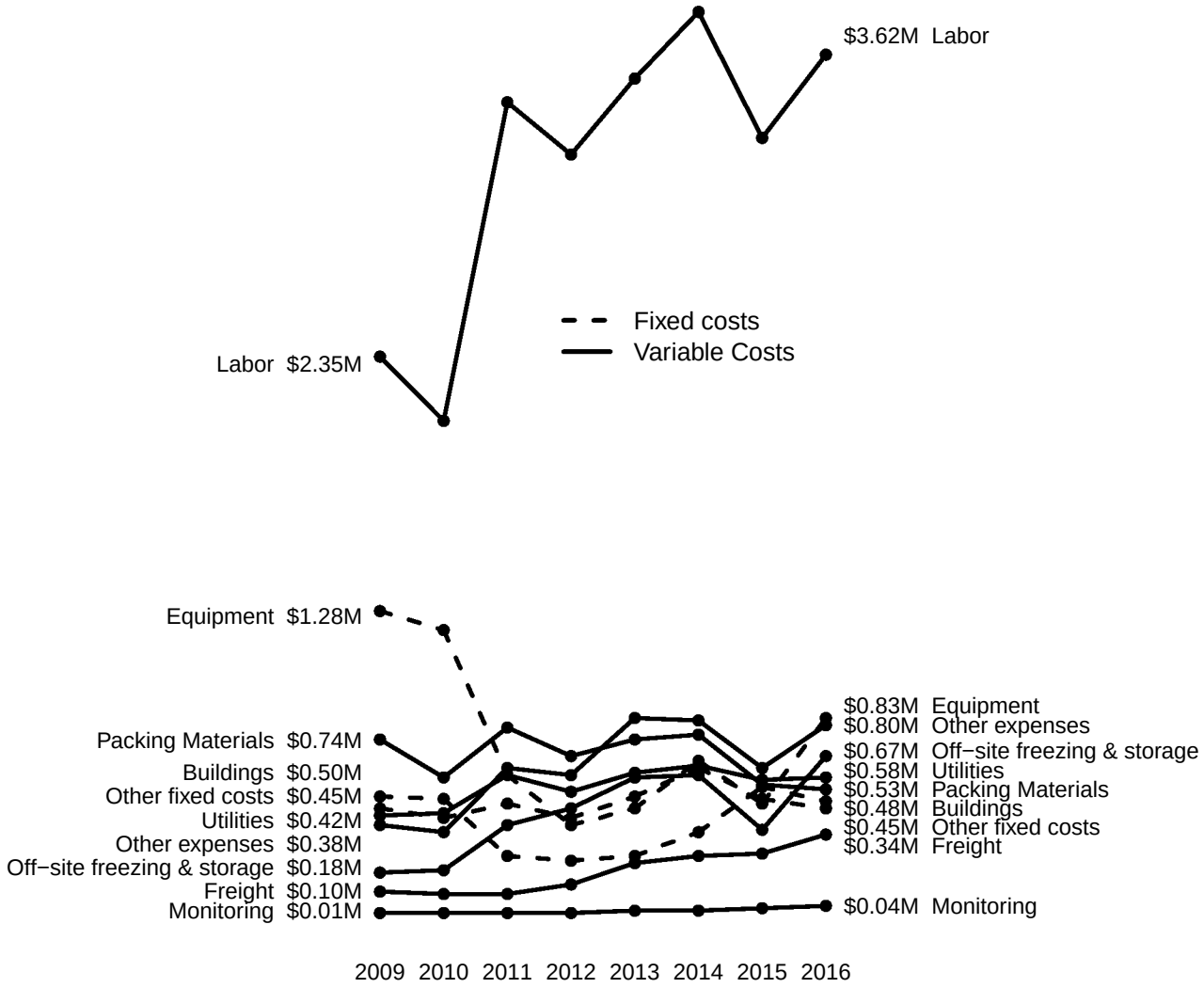


Figure 7: Average fixed (dashed line) and variable (solid line) costs per catch share processor (millions of 2016 $). Fish purchase costs are not displayed on the figure; they averaged $7.4 million in 2009 and $13.1 million in 2016.

Fixed costs include capitalized expenditures on buildings, machinery, processing equipment, rental or lease of buildings and other structures, and repair and maintenance on facility buildings, machinery, and equipment. In general, these costs do not vary with fish production as much as variable costs. Average total fixed costs have decreased since the pre-catch share baseline period, largely due to a decrease in capitalized expenditures, as other fixed costs, such as rent and repairs, have increased during this period. Fixed costs made up about 9% of total annual expenditures for catch share processors in 2016, and averaged $1.76 million, which is a decrease of 18% compared to the baseline period.

Net Revenue

The EDC Program measures the net economic benefits of the catch share program by reporting two types of net revenue. The first is variable cost net revenue, which is revenue minus variable costs. The second is total cost net revenue, which is revenue minus both variable and fixed costs.[10] To provide a complete picture of the changes that have occurred over time, both net revenue measures are presented at two scales. Figure 8 shows the average net revenue per company while Figure 9 shows the industry-wide net revenue (total value generated by all catch share processors). It is important to note that the EDC forms aim to capture only costs that are directly related to facility maintenance and processing operations, and not costs related to activities or equipment beyond the facility. Therefore, the net revenue reported here is an overestimate of the true net revenue.[11]

When the fixed and variable costs associated with receiving and processing fish are accounted for, the average total cost net revenue for all operations (catch share and non-catch share) was $0.8 million for catch share processors in 2016, representing a 4% decrease between the baseline period and 2016 (Figure 8).

Considering only the costs that vary directly with fish production, the average variable cost net revenue of catch share processors was $2.6 million, representing a 14% decrease compared to the baseline period and a 12% decrease compared to 2015.

While the 2016 average revenue and average variable costs were 49% and 64% higher than the baseline period, respectively, fixed costs were 18% lower. Therefore, the rise in average total cost net revenue is largely a result of reduced expenditures.

The industry-wide total cost net revenue for all catch share processors in 2016 was $14 million and industry-wide total variable cost net revenue was $43.9 million (Figure 9).

[10] See Figure 7 for a categorization of variable versus fixed costs.
[11] See Section 12 of the Data Summaries for more information.

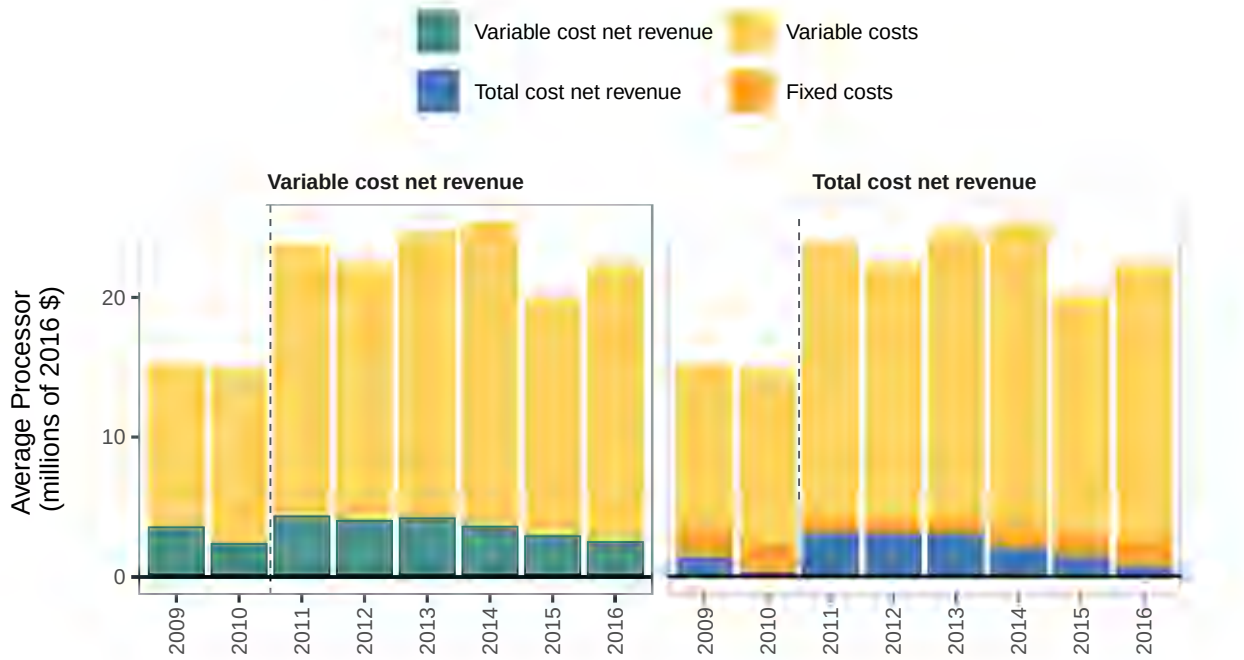


Figure 8: Average variable cost net revenue (revenue minus variable costs) (left) and total cost net revenue (revenue minus variable costs and fixed costs) (right) for all operations of catch share processors (millions of 2016 $). Dashed line represents the beginning of the catch share program.

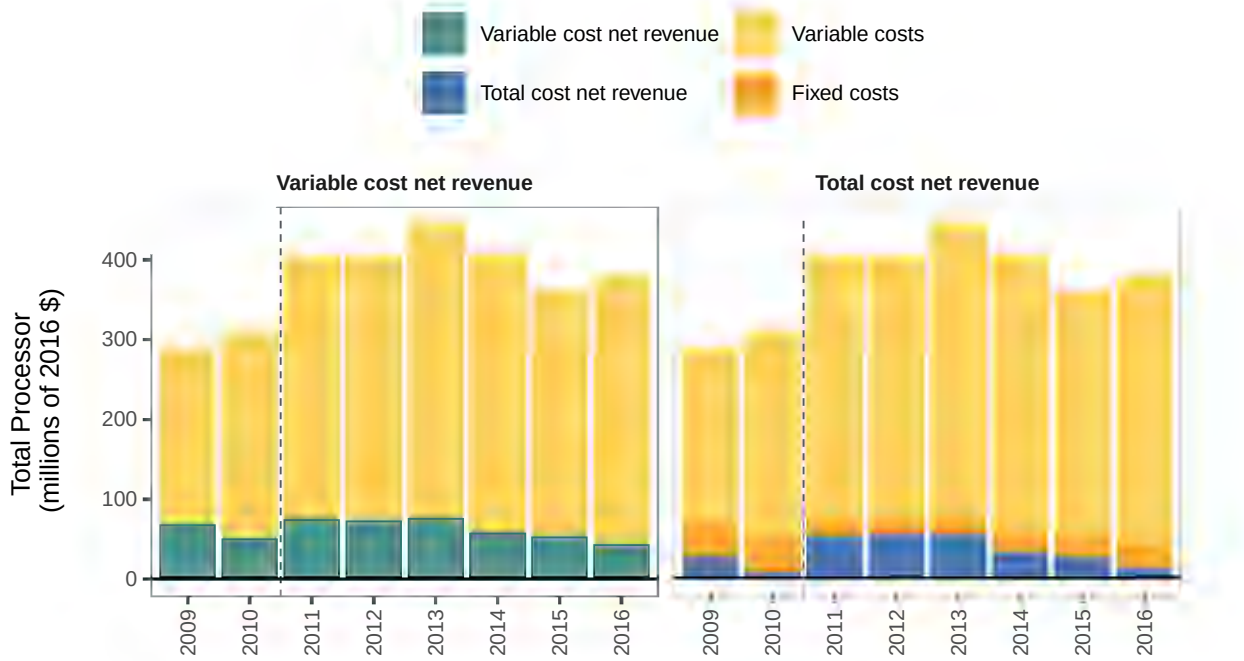


Figure 9: Industry-wide total variable cost net revenue (revenue minus variable costs) (left) and total cost net revenue (revenue minus variable costs and fixed costs) (right) for all operations of catch share processors (millions of 2016 $). Dashed line represents the beginning of the catch share program.

Fish Production

In order to examine changes specific to production of different species groups, fish production by catch share processors is separated into shoreside Pacific whiting operations and non-whiting groundfish operations, described in the following pages. Cost and revenue information collected for all operations is allocated to Pacific whiting or non-whiting groundfish production using cost disaggregation (See Appendix A). Some of the information on the EDC form for shorebased processors is collected at the species level (e.g. fish production information), not the fishery level like the catcher vessels. Therefore, costs are allocated to species groups rather than fisheries.

Shoreside Pacific whiting

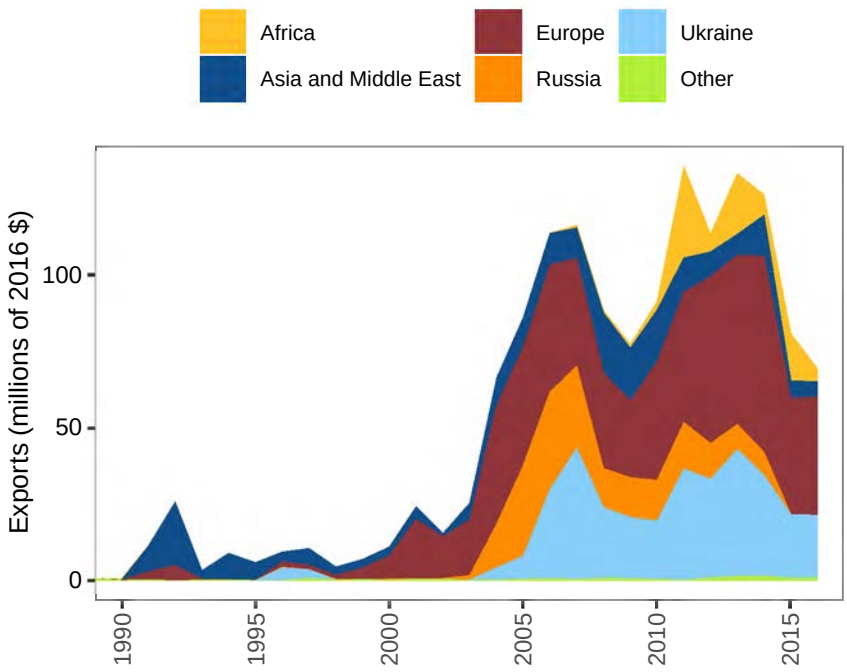


Figure 10: Total exports of fresh and frozen Pacific whiting (including mothership, catcher-processor, and shoreside production) from the U.S by recipient region (millions of 2016 $).

The domestic Pacific whiting fishery grew rapidly in the 1990s after the United States banned foreign vessels from processing Pacific whiting harvested off the West Coast. The fishery received Marine Stewardship Council (MSC) certification[12] in 2009 (and recertification in 2014). The Pacific whiting fishery has subsequently been transformed into one of the largest fisheries by volume in the United States. In 2016, approximately 36,500 metric tons of Pacific whiting worth almost $70 million were exported from the United States,[13] which was lower than recent years (Figure 10). Since 2000, most of these exports went to the European Union, followed by Russia and Ukraine. In 2014, Russia implemented trade sanctions against Europe and the United States, which may have caused declining demand for whiting exports. To date, it is unknown when these sanctions will be lifted.

Eight processors participated in the shoreside Pacific whiting fishery in 2016 compared with 12 during the baseline period. Each processor received Pacific whiting from an average of nine vessels.

Product type, weight, and value

The EDC form collects information about seven Pacific whiting product types: fillets, frozen whole, headed-and-gutted, surimi, roe, unprocessed, and other. Prior to the implementation of catch shares, the majority (77%) of whiting production was headed-and-gutted. However, in recent years, headed-and-gutted products constitute approximately 54% of production, followed by other products including unprocessed (30%) and frozen whole Pacific whiting (8%) (Figure 11). While filleted Pacific whiting commands the highest price, headed-and-gutted Pacific whiting generates the highest total revenue.

[12] The MSC certification indicates that the West Coast Pacific whiting fishery has met the standard for "good management practices to safeguard jobs, secure fish stocks for the future and to help to protect the marine environment". This certification has opened new markets, largely in the European Union, for Pacific whiting.

[13] NMFS Science and Technology Commercial Fisheries Statistics, http://www.st.nmfs.noaa.gov/commercial-fisheries/foreign-trade/index.

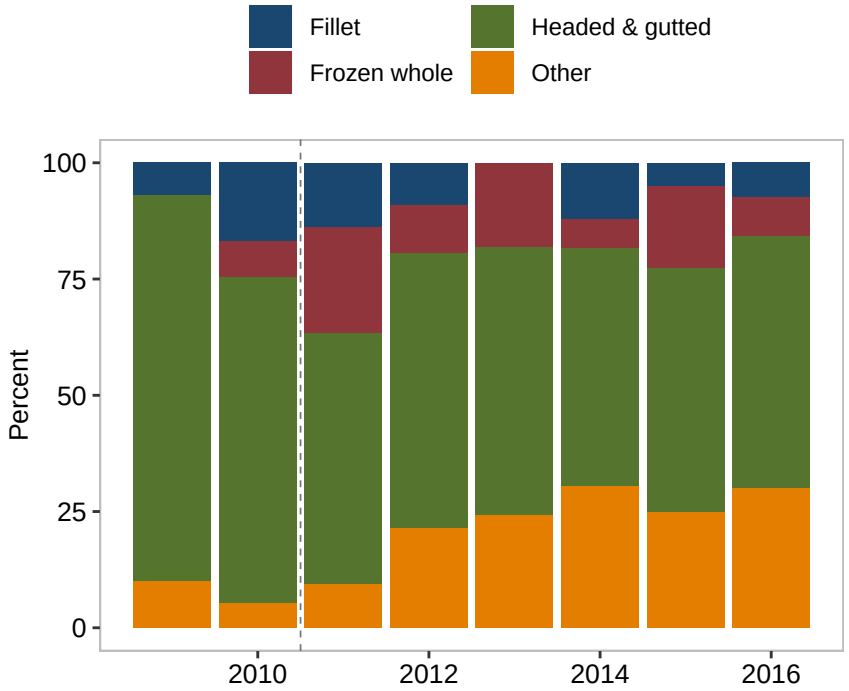


Figure 11: Pacific whiting product types as a percent of industry-wide production volume. The "other" category includes surimi, roe, and unprocessed products, as well as frozen whole in 2009 and fillet in 2013, to protect confidential data. Dashed line represents the beginning of the catch share program.

Processing Pacific whiting resulted in $47 million in total sector-wide production value in 2016. These processors also earned revenue from processing shrimp (16% of total revenue), crab (30%), and non-whiting groundfish (18%) as well as other species (16.3%).

Markup

The input price for Pacific whiting was higher than pre-catch shares ($0.10 per pound) levels in all years since the implementation of the catch share program, until 2015 when the price dropped to $0.08 per pound. In 2016, the whiting price dropped further to $0.07 per pound. Meanwhile, the output price for Pacific whiting increased from 2015 ($0.41) to 2016 ($0.45). However, the output price still remains 36% lower than pre-catch shares (Figure 6).

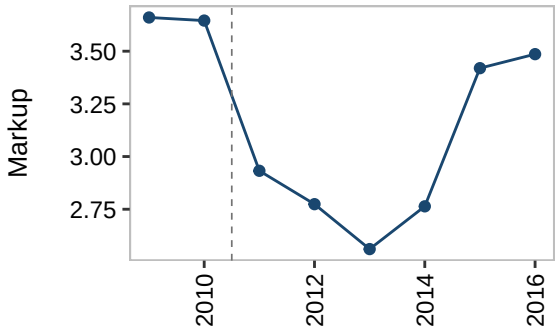


Figure 12: Average markup for Pacific whiting. Dashed line represents the beginning of the catch share program.

Markup, a measure of value-added, is the ratio of the value of fish produced to the cost of fish purchased. The average markup for shoreside Pacific whiting increased from 3.4 in 2015 to 3.5 in 2016, but was highest during the baseline period at 3.7 (Figure 12).

Costs

Average variable costs for Pacific whiting production increased substantially from the pre-catch shares period, mainly due to an increase in the catch limit for Pacific whiting and therefore a higher production volume. Average variable costs were $5.3 million per processor in 2016, compared to $4.5 million in 2015 and $2.5 million in the baseline period. Variable cost per output pound of Pacific whiting was $0.50 in 2016, which is less than the variable cost per pound in the pre-catch shares period ($0.57). Labor, packing materials, and utilities are the largest components of variable costs for Pacific whiting operations (Figure 13).

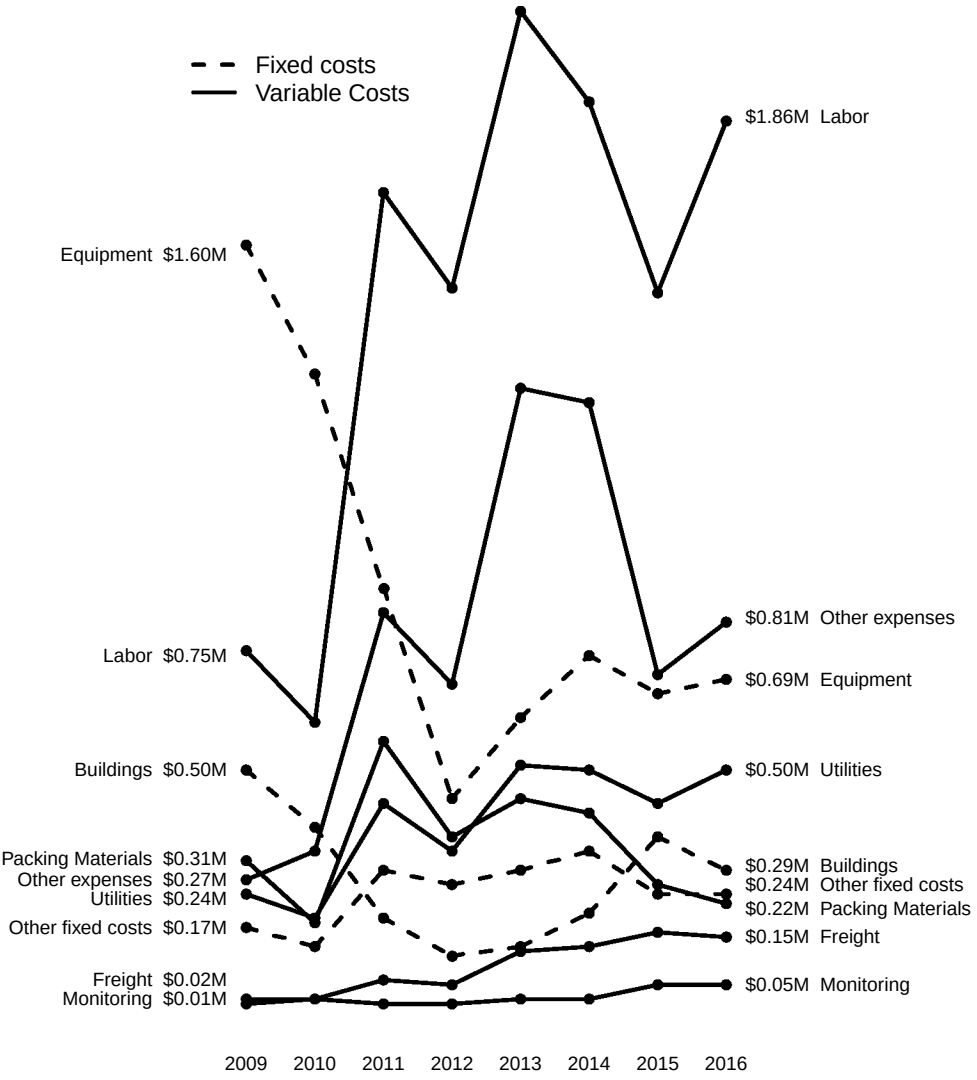


Figure 13: Average fixed (dashed line) and variable (solid line) costs per processor from production of shoreside Pacific whiting (millions of 2016$). Fish purchase costs are not displayed on the figure; they averaged $1.2 million in 2009 and $1.7 million in 2016.

In 2016, average fixed costs were $1.04 million per processor, a decrease from $1.96 million per processor in the pre-catch shares period.

Net Revenue

In 2016, average revenue per company from Pacific whiting production was $5.9 million, average variable cost net revenue was $602,000, and average total cost net revenue was -$440,000. Both average variable cost net revenue and total cost net revenue have increased from 2015, when variable cost net revenue

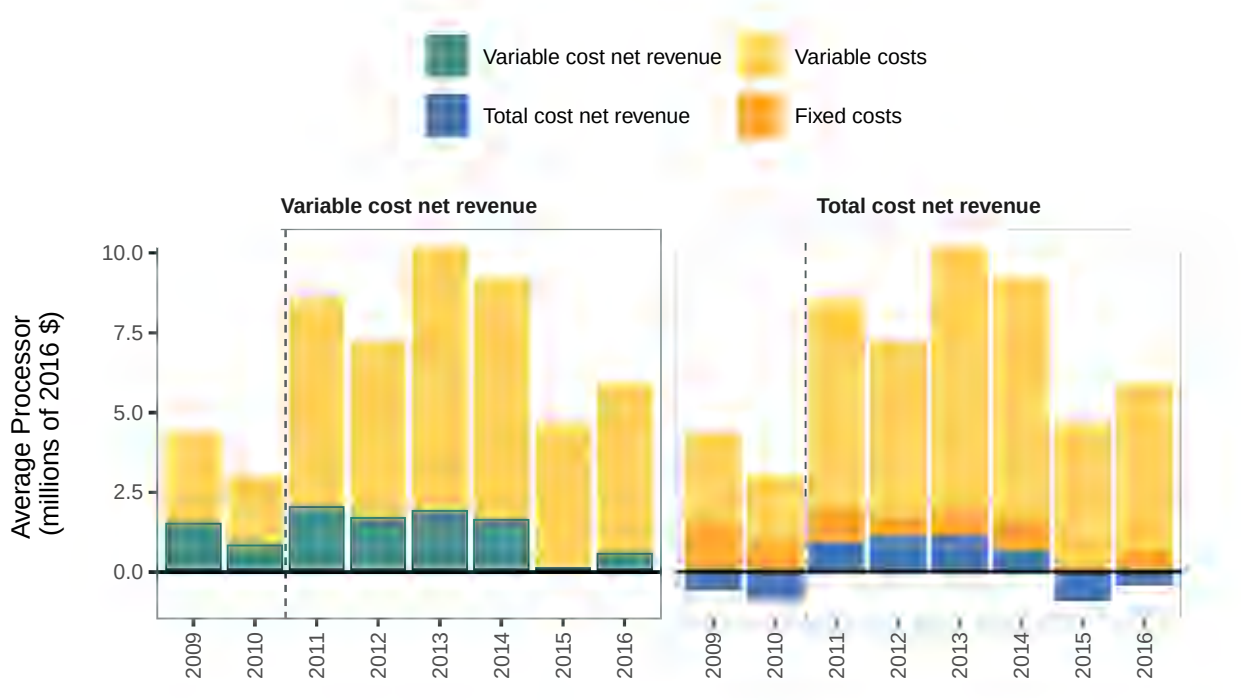


Figure 14: Average variable cost net revenue (revenue minus variable costs) (left) and total cost net revenue (revenue minus variable costs and fixed costs) (right) from production of shoreside Pacific whiting (millions of 2016 $). Dashed line represents the beginning of the catch share program.

was the lowest it had been since the beginning of the data collection and total cost net revenue was negative for the first time in the catch share period. However, these indicators still remain below pre-catch share levels. The increases in revenue during the first four years of the catch share program were a result of an increase in the catch limit for Pacific whiting. These increases in revenue coupled with falling fixed expenditures on equipment drove increases in total cost net revenue during the first several years of the catch share program.

Non-whiting groundfish

Sixteen processors produced non-whiting groundfish in 2016, with each processor receiving fish from 18 vessels on average. The number of non-whiting groundfish processors is very similar to the baseline period. Non-whiting groundfish include flatfish (e.g., petrale sole and Dover sole), roundfish (e.g., sablefish and lingcod), and rockfish. Every year, tens of millions of dollars of sablefish is exported from the West Coast to countries around the world, primarily Asia and the Middle East (Figure 15). Since 2011, the total value exported to Japan has steadily decreased each year, while the total value exported to elsewhere in Asia and the Middle East increased over the last few years. The West Coast groundfish limited entry trawl fishery became MSC-certified in 2014.

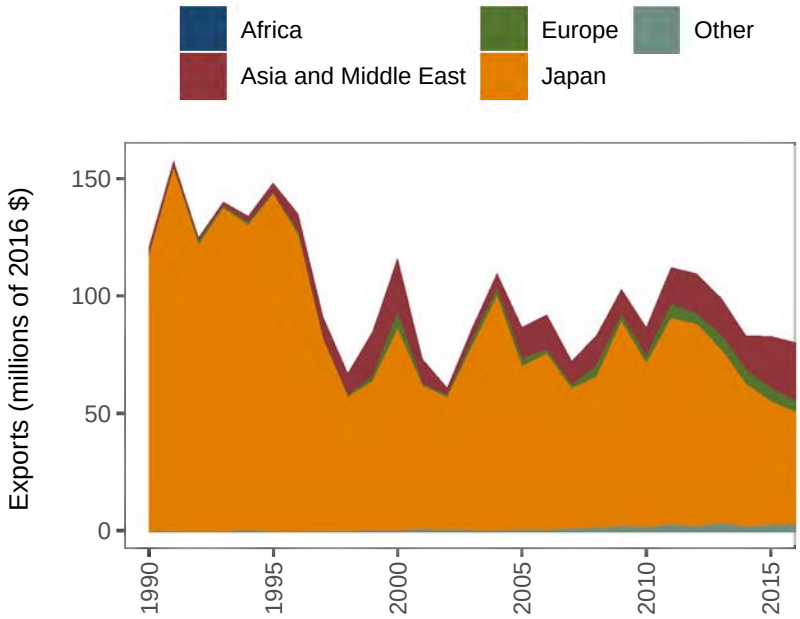


Figure 15: Total exports of sablefish from the West Coast by recipient region (millions of 2016 $).

Product type, weight, and value

Non-whiting groundfish product types reported on the EDC survey form include processed fresh, frozen, unprocessed, and other. Most of the non-whiting groundfish is sold fresh, except for sablefish which is primarily frozen (Figure 16). For Dover sole, Petrale sole and rockfish, the percentage of fresh product has generally decreased and the percentage of frozen and unprocessed product has increased since 2009. The opposite trend can be seen for lingcod, where the proportion of fresh product is higher compared with the baseline period, and increasing in 2016 compared to the previous year

Processing non-whiting groundfish resulted in $42.3 million in total production value in 2016. These processors also earned revenue from processing Pacific whiting (20%), processing shrimp (16%), and processing crab (30%) as well as other species.

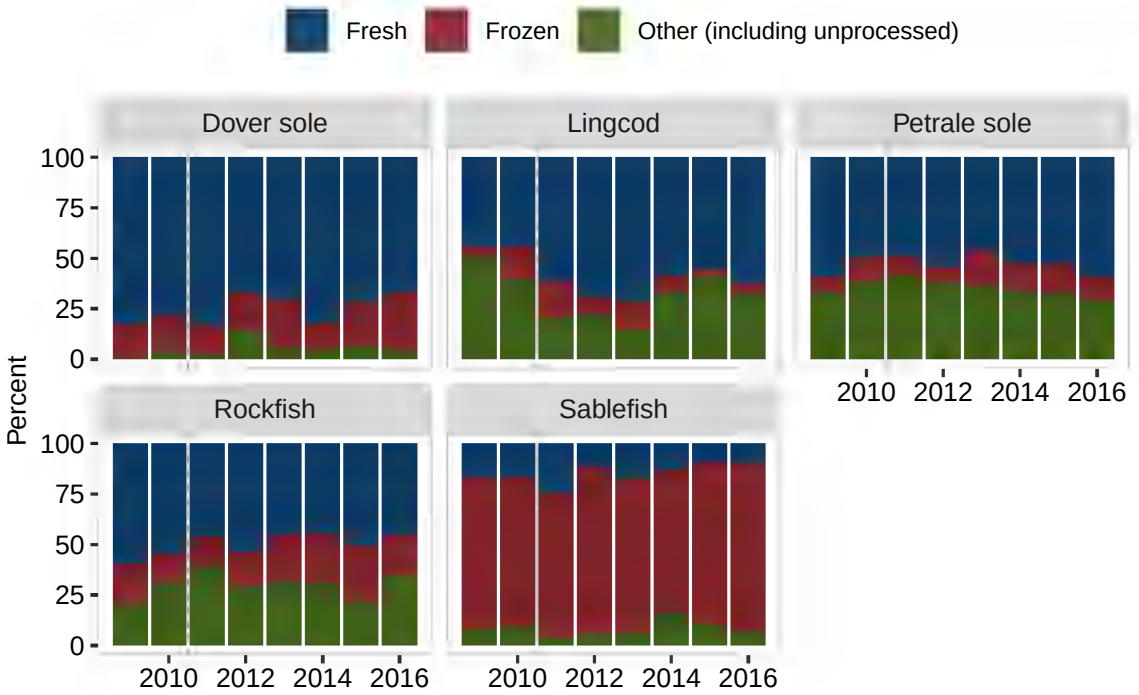


Figure 16: Product types as a percent of industry-wide production volume for select groundfish species. Dashed line represents the beginning of the catch share program.

Markup

The industry average markup for non-whiting groundfish remained relatively constant prior to 2016, falling slightly to 1.5 in 2016, the lowest value since the beginning of the data collection period. Markup rates for some individual species have varied since the baseline period, such as lingcod, Dover sole, and petrale sole (Figure 17).

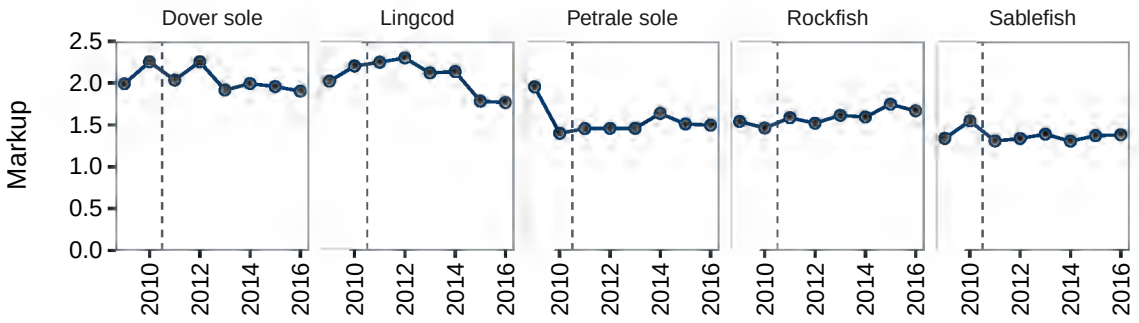


Figure 17: Industry average markup for select groundfish species. Dashed line represents the beginning of the catch share program.

Costs

Costs for non-whiting groundfish operations are smaller compared to those of Pacific whiting operations, but the relative contributions from various cost categories are comparable. Namely, expenses on labor, equipment and packing materials are among the highest costs, while monitoring and freight are the among the lowest (Figure 18). Average variable costs were $4.5 million and average fixed costs were $285,000 per processor. Variable cost per output pound of non-whiting groundfish was $2.99 in 2016.

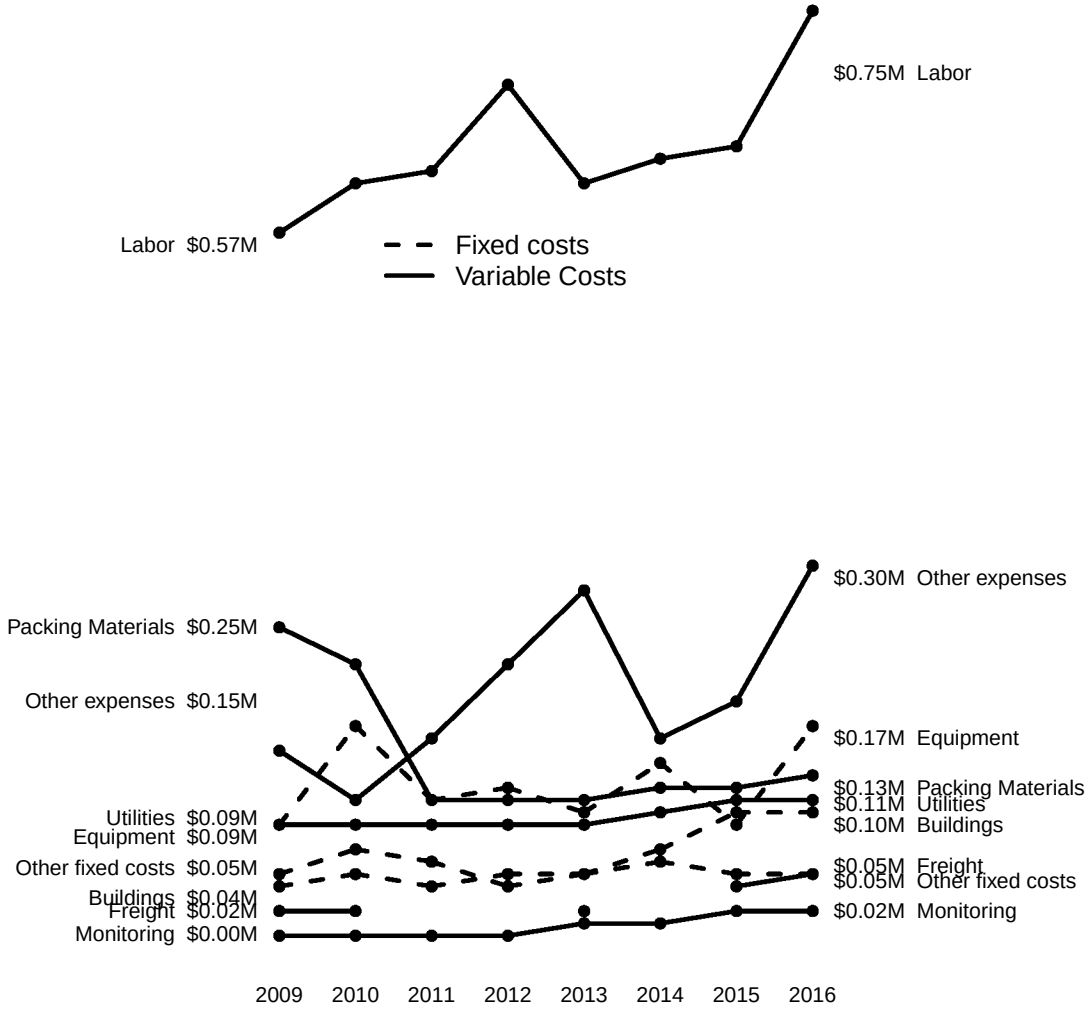


Figure 18: Average fixed (dashed line) and variable (solid line) costs per processor from production of non-whiting groundfish (millions of 2016 $). Fish purchase costs are not displayed on the figure; they averaged $2.9 million in 2009 and $3.1 million in 2016.

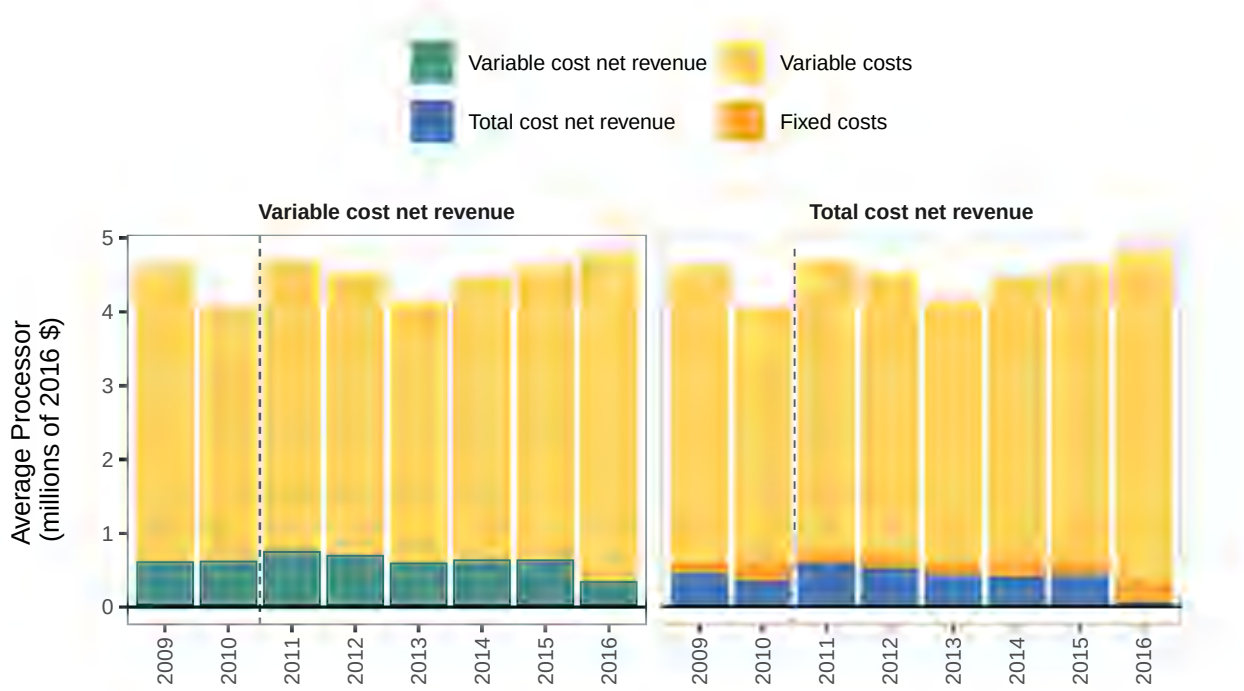


Figure 19: Average variable cost net revenue (revenue minus variable costs) (left) and total cost net revenue (revenue minus variable costs and fixed costs) (right) from production of non-whiting groundfish (millions of 2016 $). Dashed line represents the beginning of the catch share program.

Net Revenue

Average revenue for non-whiting groundfish production was $4.8 million per company, average variable cost net revenue was $356,000, and average total cost net revenue was $70,400 (Figure 19). Average total cost net revenue and variable cost net revenue were lower in 2016 than in the baseline period.

Non-Processors

Catch share non-processors are companies that purchased catch share groundfish but did not process groundfish.[14] Non-processors accounted for a small proportion of fish weight received in 2016 by all catch share first receivers.

Due to the small number of catch share non-processors, changes in cost and net revenue measures are mainly driven by entry and exit of participants from year to year. For more details on non-processors, see Data Summaries Section 15.

Figure 20: Average total revenue (left) and average variable cost net revenue (revenue minus variable costs) (right) for all groundfish operations of catch share non-processors (thousands of 2016 $). Non-processors were not required to submit EDC data until 2011.

[14] On the 2009 and 2010 forms, a company was permitted to leave most of the form blank if they did not process any groundfish or whiting. This was changed on the 2011 form (and subsequent forms) and all participants are now required to answer all questions. Thus, the data available for non-processors are from 2011 onward.

First Receiver and Shorebased Processor Report

FIRST RECEIVER AND SHOREBASED PROCESSOR REPORT

Contents

List of Tables

List of Figures

First Receiver and Shorebased Processor Data Summaries

1 Introduction

1.1 Background

The US West Coast groundfish fishery takes place off the coasts of Washington, Oregon and California, and comprises over 90 different species of fish. Fish are harvested both commercially and recreationally. The commercial fishery has four components: limited entry with a trawl endorsement, limited entry with a fixed gear endorsement, open access, and tribal. In January 2011, the West Coast Limited Entry groundfish trawl fishery transitioned to the West Coast groundfish trawl catch share program. The catch share program consists of cooperatives for the at-sea mothership (including catcher vessels and motherships) and catcher-processor fleets, and an individual fishing quota (IFQ) program for the shorebased trawl fleet.[1]

The Economic Data Collection (EDC) Program[2] was implemented as part of these new regulations to monitor the economic effects of the catch share program. Annual economic data submissions are required from all fishery participants: catcher vessels, motherships, catcher-processors, and first receivers and shorebased processors (§50 CFR 660.114). Baseline, pre-catch share, data were submitted in 2011 for the 2009 and 2010 operating years. Data for the first year the fishery operated under the catch share program (2011) were submitted in 2012. The most recent data (2016) were collected in 2017.

The EDC Program has enhanced the quantity and quality of economic information available for analysis and the management of the West Coast groundfish trawl fishery. While costs and earnings data are

[1] Information about the Catch Share Program is available at http://www.westcoast.fisheries.noaa.gov/fisheries/groundfish_catch_shares/.

[2] Additional information on the EDC Program, including the EDC data collection forms can be found at www.nwfsc.noaa.gov/edc.

available for shorebased catcher vessels starting in 2004,[3] this is the first data collection from the first receiver and shorebased processor sector. This report summarizes the 2009-2016 EDC first receiver and shorebased processor survey data, and with its companion reports covering the other sectors, is the fifth in what is expected to be an annual series of reports. EDC economists will expand and refine the scope and methods used with each new annual publication.

1.2 Understanding the report

The unit of analysis identified in the summary tables is the first receiver site license owner, or "company." Owners of multiple first receiver site licenses are required to submit a form for each site (facility). To maintain analytical consistency, reduce the reporting burden for participants, and protect confidential data, data are aggregated to the company level for businesses that own multiple facilities with first receiver site licenses. Figure 21 shows first receiver site license owners and locations in 2015.[4]

First receiver and shorebased processor operations range from independent catcher vessel owners who unload and truck their own fish, to large multi-facility processing companies with a wide range of product offerings. Some respondents who provide information do not own a physical processing facility and thus do not incur many of the costs on the EDC form. In order for the information contained in this report to be more meaningful, the summary statistics for those companies who process fish and those companies who do not process fish are reported in two separate sections.[5] This report refers to EDC companies that have processing activity as EDC Processors, and refers to EDC companies that have no processing activity as EDC Non-Processors. Figure 22 illustrates how these designations are determined and used throughout the report. Table 1.1 shows the numbers of processing and non-processing companies that submit EDC forms each year. On the 2009 and 2010 forms, a company was permitted to leave most of the form blank if they did not process any groundfish or whiting. This was changed on the 2011 form (and subsequent forms) and all participants have since been required to answer all questions. Thus, the data available for EDC Processors are from companies that processed groundfish in 2009 and 2010, and from companies that processed groundfish or any other fish from 2011 onward. The data available for EDC Non-Processors in this report are from 2011-2016.

[3] Lian, C.E. 2010. West Coast limited entry groundfish trawl cost earnings survey protocols and results for 2004. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-107, 35 p.

[4] First receiver site license information was obtained here: https://www.webapps.nwfsc.noaa.gov/apex_ifq/f?p=112:45:0::NO.

[5] In the EDC First Receiver and Shorebased Processor Report (2009-2011), summary statistics were based on all survey respondents including those that did not process fish.

Figure 21: First receiver site license owners and locations in 2016.[4]

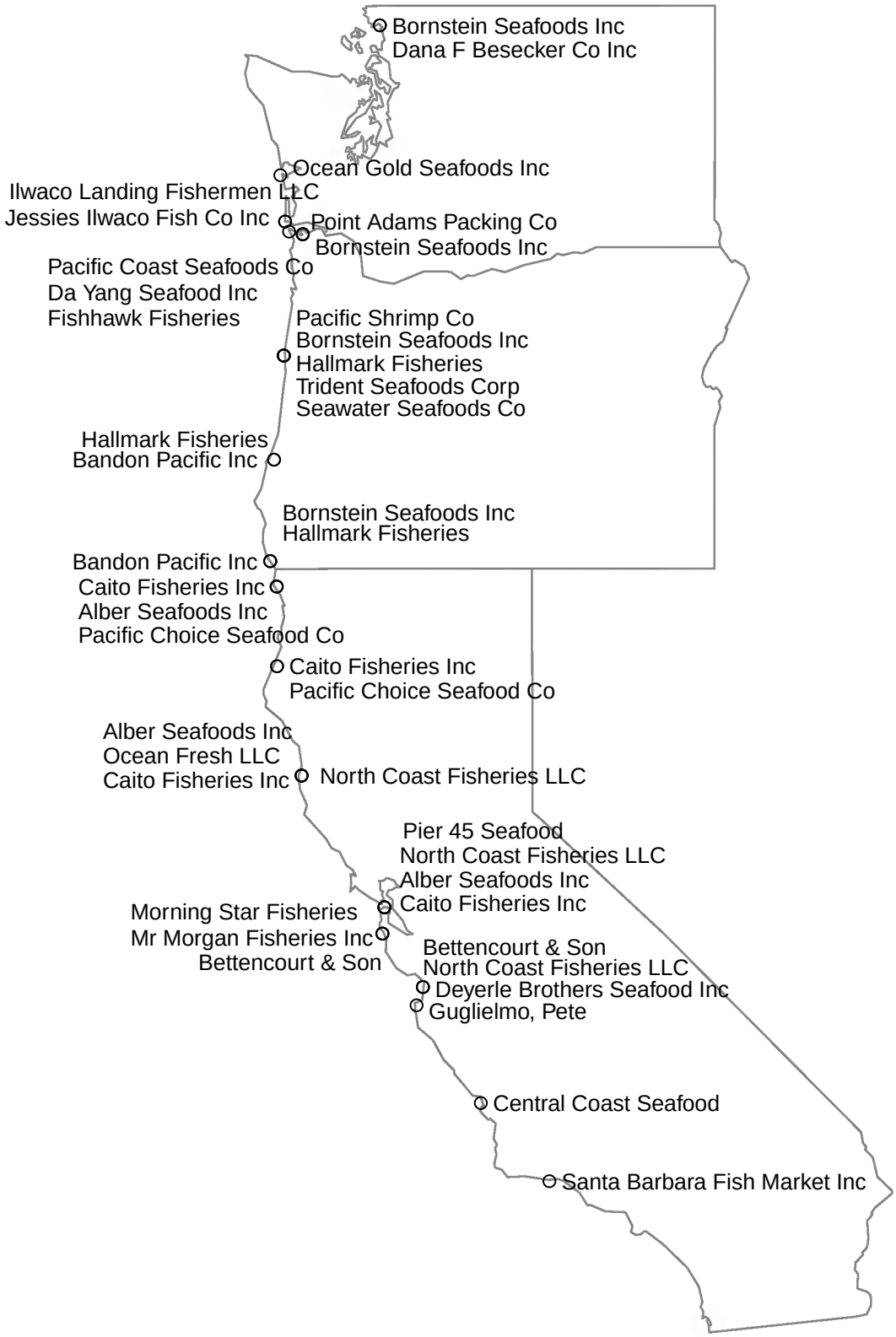


Table 1.1: EDC Processors and Non-Processors. Number of companies that reported processing activity and number of companies that reported no processing activity by survey year (N = number of companies, % = percent of all companies that submitted a form in survey year).

	2009		2010		2011		2012		2013		2014		2015		2016	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
EDC Processors	20	100%	22	100%	24	71%	24	73%	24	73%	23	82%	22	81%	23	82%
EDC Non-Processors	—	—	—	—	10	29%	9	27%	9	27%	5	18%	5	19%	5	18%

For questions not applicable to a company's particular business operation, the participant is instructed on the form to fill in "Not Applicable" or "NA". For each value displayed in the summary data tables, N is displayed. In most cases, N represents the number of responses to the question that are not "NA" and not zero, unless noted otherwise. If a particular category had only "NA" responses for all participants, a zero is used. The "—" symbol represents cases where the information was not requested on the form for that survey year.

Although participants are identified on a calendar year basis, they complete the form using information based on the fiscal year of the entity. Currently, data are presented for survey year (fiscal year), and data assigned to a survey year may not overlap completely with the calendar year. Information obtained from outside of the EDC Program are adjusted to match the fiscal year provided on each form.

All data submitted via the EDC Program are confidential under 402(b) of the 2007 reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. 1801, et seq.) and under NOAA Administrative Order 216-100. In order to protect these data, a rule of three and a rule of 90-10 are implemented. The rule of three requires a response from at least three companies in order to show a summary statistic. The 90-10 rule requires that no single company's value should comprise over 90 percent of the value displayed. The tables show a "***" for data points where there were less than three companies reporting the information, and/or if one company's responses accounted for greater than 90 percent of the average value. Zeroes are shown if all companies reported zeroes. More information about how confidential data are protected in the EDC Program can be found in the Administration and Operations report. Simple means are reported for statistics that denote the performance of an average entity (i.e., net revenue) while weighted means are reported for statistics that describe characteristics of the fishery (i.e., ex-vessel prices, markup, etc.).

In order to track and assess the variation of data submitted by participants across any given variable or statistic, these reports include the coefficient of variation (CV) of the mean. The stacked dots included in the data tables provide information about the coefficient of variation (CV) of the mean. We use the following scoring:

- ⋅ represents $CV < 0.5$,
- ⁝ represents $0.5 \leq CV < 1.0$,
- ⁞ represents $1.0 \leq CV < 2.0$, and
- ⋮ represents $2.0 \leq CV$.

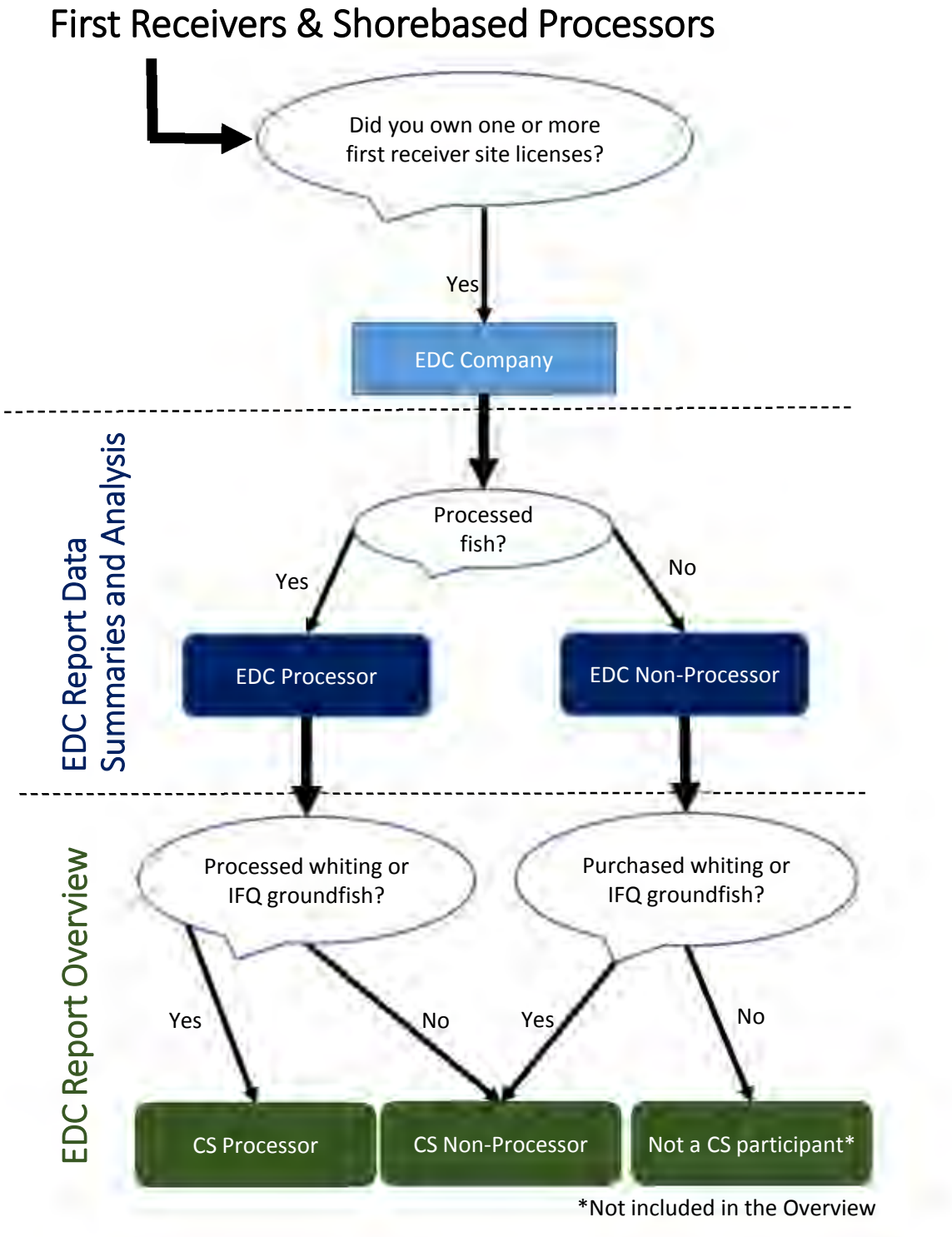


Figure 22: First receiver and shorebased processor classifications in this report.

For 2009-2016, the maximum CV for EDC Processors was 3.37, and the maximum CV for EDC Non-Processors was 2.2. The responses with the highest variability for EDC Processors include purchase and production information for individual species, as well as capitalized expenditures on buildings and equipment. This is reasonable for purchase and production information because there is a wide variety of operations and activities across processors over time. Additionally, a given species may be the main operation of one company, while another company may only purchase one landing of that species. In terms of capitalized expenditures, some processors may make very few investments or improvements to their facility in a given year while others make substantial investments. These fixed costs are inherently heterogeneous across processors over time.

Unlike the Overview, all values reported in the Data Summaries are generated from the raw responses received from participants and, therefore, are in nominal dollars.

1.3 Purpose of the report

This report, like the other four EDC reports,[6] has multiple objectives. The first is to provide basic economic data summaries that can be used for a variety of purposes associated with fishery management. Since much of the data collected are confidential under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) of 2007, the data are summarized as averages or totals for each question on the EDC forms. Thus summarized, the reports make the data available to the public for both research and informational purposes.

The second objective is to provide information about the performance of the catch share program. This includes information that can be used to monitor whether and to what degree the goals of the program are being met. These reports served as the basis for the 5-year review of the catch share program that is mandated by the MSA, as well as the NMFS National Catch Shares Performance Indicators.

Third, the reports either provide or serve as the basis for economic models that will be used as part of the PFMC's biennial specification process for groundfish management. These models include the IO-PAC model,[7] as well as estimates of revenue, costs, and net revenue.

Lastly, and perhaps most importantly, the data reports are expected to provide a useful catalyst for feedback on the data collected and its analysis.

---

[6] In addition to the first receiver and shorebased processor report, there are four companion reports:

- Draft Economic Data Collection Program, Administration and Operations Report (May 2016)
- Draft Economic Data Collection Program, Catcher-Processor Report 2009-2016 (June 2018)
- Draft Economic Data Collection Program, Catcher Vessel Report 2009-2016 (June 2018)
- Draft Economic Data Collection Program, Mothership Report 2009-2016 (June 2018)

[7] Leonard, J., and P. Watson. 2011. Description of the input-output model for Pacific Coast fisheries. U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-111, 64 p.

The Administration and Operations report describes the EDC Program administration and fielding of the surveys, the EDC forms, data QA/QC and data processing, and safeguarding confidential information. The other EDC reports provide basic data summaries for the catcher vessel, catcher-processor, and mothership sectors.

1.4 First receiver and shorebased processor form administration

Completion of EDC forms is mandatory for participants in the catch share program. The regulations for defining who is required to complete an EDC form differs between the baseline data collection (2009 and 2010) and all annual/ongoing data collections for 2011 onward. Under 50 CFR part 660 and section 402(a) of the Magnuson-Stevens Act (16 U.S.C. 1801, et seq.), all owners and lessees of a shorebased processor and all buyers that receive groundfish or whiting harvested with a limited entry trawl permit as listed in the Pacific States Marine Fisheries Commission's state fish ticket database were required to submit an EDC form in 2009 and 2010. Beginning in 2011, a first receiver site license was required to land catch share harvested fish. The regulation requires all owners of a first receiver site license in 2011 and beyond, and all owners and lessees of a shorebased processor (as defined under "processor" at 660.11, for purposes of EDC) that received round or headed-and-gutted catch share species groundfish or whiting from a first receiver in 2011 and beyond to submit an EDC form for that year. Owners of multiple facilities are required to submit a form for each processing facility. A first receiver site license application will not be considered complete until the required EDC form for that license owner associated with that license is submitted.

A calendar year is used to determine which facilities meet the criteria. For example, in 2017, data were collected from all owners of a first receiver site license in 2016. The forms are fielded on this schedule in order to allow participants the time necessary to complete their taxes, which may contain some information that is required on the EDC forms. Participants are identified using contact information provided by the West Coast Regional Office - Permit Office (Permit Office).

If a form has missing information, or the information provided on the form is believed to be incorrect, EDC Program staff attempt to contact the participant to correct the information. On occasion, the participant cannot be reached or the participant cannot provide the missing information. In these cases, the missing or inaccurate data are treated on a case-by-case basis during analysis as documented in the Administration and Operations report. Data are validated and verified with external data sources whenever possible. These data sources include the Permit Office and state fish tickets.

Table 1.2: Survey responses. Total forms owed, number of forms that were submitted, number of forms that are complete, and number of companies that submitted EDC forms by survey year.

Status	2009	2010	2011	2012	2013	2014	2015	2016
Total forms owed	55	58	50	53	53	46	47	44
Submitted forms	37	45	49	51	51	46	46	44
Complete forms	37	45	49	50	50	46	46	44
Companies that submitted forms	29	37	34	36	34	28	28	28

EDC Processors

This section of the report summarizes information on first receivers and shorebased processors that process fish: EDC Processors. Groundfish regulations (50 CFR 660.11) define a shorebased processor as "a person, vessel, or facility that engages in commercial processing... at a facility that is permanently fixed to land." Data are not reported for companies that received, but did not process groundfish in 2009 and 2010. In 2009 and 2010, only facilities that processed groundfish were required to fill out the entire form. In 2011 onward, all facilities with a first receiver site license were required to complete the entire form, regardless of whether groundfish were processed. These companies are only included for 2011 onward.

2 Facility Value

Processors provide information about the appraisal value of the facility, including market value and replacement value (Table 2.1).

Table 2.1: Value of facility for EDC Processors. Average market and replacement value of facility from most recent appraisal (millions of $) (N = number of EDC Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Market value	$1.45˙	4	$1.16⁝	5	$1.65˙	3	$1.54˙	4	$4.78⁝	5	$5.84⁝	4	$5.84⁝	4	$5.10⁝	5
Replacement value	$4.97⁝	5	$4.14⁝	6	$6.34⁝	3	$6.34⁝	3	$4.46⁝	3	***	***	***	***	***	***

3 Employment

This section provides information about number of employees, number of hours worked, and labor costs. These include full, part-time, and temporary employees. Production workers and non-production employees are provided separately.

3.1 Production workers

Production workers include workers at the facility up through and including the line-supervisor level who are engaged in fabricating, processing, assembling, inspecting, receiving, packing, warehousing, shipping, maintenance, repair, janitorial staff, product development, or transporting product on site. The EDC form asks for production worker employment information for the week that includes the 12th day of the month, thus the following tables present an average weekly snapshot of employment that is assumed to be representative the year.

Table 3.1: Weekly employment: Number of production workers for EDC Processors. Number of production workers for the week that includes the 12th of the month (N = number of EDC Processors with non-zero, non-NA responses).

Month	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
January	62	19	71	21	84	22	85	21	88	22	65	21	70	20	68	22
February	48	19	57	21	73	22	91	21	76	22	53	21	57	20	60	21
March	50	19	51	21	52	22	61	21	69	22	54	21	55	21	46	21
April	54	18	57	20	56	22	68	21	65	22	67	21	76	21	57	22
May	66	18	86	20	62	23	72	21	76	22	66	22	78	21	61	22
June	108	18	91	21	89	23	84	22	80	22	77	22	83	21	82	22
July	127	19	105	21	128	24	116	23	118	22	107	22	87	21	87	22
August	92	19	118	21	121	24	119	23	128	22	107	22	100	21	84	22
September	92	18	84	20	108	24	104	23	134	22	106	22	90	21	82	22
October	83	19	78	20	80	23	105	22	108	22	89	22	99	21	78	22
November	83	18	77	20	68	23	91	22	85	22	72	22	71	21	59	22
December	138	19	110	21	108	22	76	22	77	22	79	21	70	21	62	22

Table 3.2: Weekly employment: Production worker hours for EDC Processors. Hours worked by production workers for the week that includes the 12th of the month (N = number of EDC Processors with non-zero, non-NA responses).

Month	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
January	1,808	19	1,672	21	2,398	22	2,320	21	2,798	22	1,681	21	2,040	20	2,668	22
February	1,075	19	1,519	21	1,945	22	2,385	21	2,519	22	1,545	21	1,544	20	1,956	21
March	1,362	19	1,448	21	1,552	22	1,436	21	2,128	22	1,446	21	1,714	21	1,286	21
April	1,493	18	1,917	20	1,943	22	2,211	21	1,739	22	2,234	21	2,496	21	1,843	22
May	2,468	18	2,995	20	2,440	23	2,279	21	2,774	22	2,599	22	2,873	21	1,894	22
June	3,670	18	3,191	21	3,962	23	2,165	22	2,689	22	2,506	22	2,924	21	3,541	22
July	6,272	19	4,095	21	6,363	24	4,765	23	5,027	22	4,281	22	3,489	21	3,945	22
August	3,342	19	4,552	21	6,348	24	4,960	23	7,655	22	4,825	22	4,508	21	3,240	22
September	2,859	18	2,763	20	4,847	24	4,299	23	6,078	22	4,874	22	3,307	21	3,439	22
October	4,146	19	2,432	20	2,952	23	4,435	22	4,575	22	3,161	22	2,764	21	2,917	22
November	3,117	18	2,373	20	2,311	23	3,308	22	3,023	22	2,087	22	2,291	21	1,944	22
December	5,015	19	5,450	21	4,565	22	2,827	22	2,253	22	2,418	21	2,161	21	2,112	22

3.2 Non-production employees

All non-production employees include those involved in supervision above the line-supervisor level, as well as individuals in the company responsible for sales, advertising, credit, collection, installation, the cafeteria, recordkeeping, clerical and routine office functions, guard services, executive management, purchasing, finance, and legal affairs. Companies that do not track hours for salaried employees are asked to assume a forty-hour work week. The EDC form asks for non-production employment figures for the week that includes the 12th of March. Non-production employment is assumed to be relatively stable throughout the year, thus the following tables present an average weekly snapshot of employment that is assumed to be representative for each month throughout the year.

Table 3.3: Weekly employment: Non-production employees for EDC Processors. Number of non-production employees and hours worked for the week that includes March 12th (N = number of EDC Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Employees	10⁝	19	12⁝	21	9⁝	24	8⁝	23	9⁝	23	9⁝	23	10⁝	22	8⁝	23
Hours	419⁝	19	616⁝	21	437⁝	24	344⁝	23	450⁝	23	357⁝	23	363⁝	22	300⁝	23

3.3 Total number of individuals employed

In 2013, the EDC form was revised to also collect the total number of individuals employed at a facility. This value represents the number of individuals who worked at any point during the year, rather than the number of positions.

Table 3.4: Annual employment for EDC Processors. Total number of individuals employed throughout the year (N = number of EDC Processors with non-zero, non-NA responses).

Employee Type	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Production	—	—	—	—	—	—	—	—	258⁝	22	216⁝	22	222⁝	21	259⁝	22
Non-production	—	—	—	—	—	—	—	—	11⁝	23	11⁝	23	12⁝	22	10⁝	23

3.4 Compensation

Average hourly compensation for production and non-production workers within each facility is calculated by dividing annual labor expenses (Section 4.2) by an estimate of total annual hours worked. The EDC form requests information on number of employees and total hours worked for the week including the 12th day of the month for production workers and for the week including the 12th day in March for non-production employees. Estimates of total annual hours worked for each company are calculated by assuming that employment information for the week of the 12th is representative of the entire month and by weighting each month equally using the following formula:

$$\sum_{m=1}^{12} \left(\frac{hours_m}{week_m} \right) * \frac{52}{12}$$

Table 3.5: Hourly compensation for EDC Processors. Average hourly compensation ($) (N = number of EDC Processors with non-zero, non-NA responses).

Employee type	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Production	$13.7	19	$13.5	21	$13.9	24	$14.5	23	$26.8	22	$16.3	22	$18.0	21	$20.1	22
Non-production	$32.9	18	$31.9	21	$31.7	24	$38.2	23	$39.1	23	$40.5	23	$40.3	22	$49.0	23

Compensation per position for each EDC Processor is calculated by dividing annual labor expenses (Section 4.2) by the average number of workers throughout the months of the year. This assumes that the average number of workers is representative of the total number of positions in a given year. For non-production workers, it is assumed that the number of workers in the week containing March 12th is representative of the number of non-production employee positions in all weeks during the year.

Table 3.6: Compensation per position for EDC Processors. Average compensation per position (thousands of $) (N = number of EDC Processors with non-zero, non-NA responses).

Employee Type	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Production	$21.8	19	$21.1	21	$24.3	24	$23.0	23	$55.4	22	$27.5	22	$30.0	21	$34.2	22
Non-production	$68.5	18	$69.6	21	$62.2	24	$75.6	23	$74.5	23	$78.1	23	$74.5	22	$87.7	23

4 Costs

This section of the report describes the cost data that are collected on the EDC first receiver and shorebased processor survey form. For the purposes of the EDC Program, costs are divided into two categories: variable costs and fixed costs. Variable costs vary with the level of fish production, and generally include items such as fish inputs, additives, labor, and utilities. Fixed costs do not vary as directly with the level of production, and generally include items such as plant facility costs and processing equipment. The designation of a cost as variable or fixed depends on many factors, including the relevant time horizon and use of the data. While some costs would clearly be considered fixed (e.g., the purchase of processing machinery), others are more difficult to categorize as fixed versus variable. For the purposes of this report, we consider the costs listed in Table 4.1 to be fixed, and the costs listed in Tables 4.2-4.6, and all tables listed under Section 4.3 to be variable. The EDC Program will continue to explore, and possibly improve, the categorization of these costs.

Finally, there are a variety of costs that are associated with running a first receiver or shorebased processing facility that are not requested on the EDC form. This is because it is difficult to determine the share of the costs associated with the facility. These costs include items that can be used for activities other than processing fish, or are too difficult to allocate to a particular facility in a multi-facility company. These expenses include trucks, and professional fees. In general, the EDC form aims to collect costs that are directly related to facility maintenance and processing operations, and not costs that are related to activities or equipment beyond the processing facility (with the one exception of off-site product freezing and storage). For these reasons, the aggregated measures of costs presented here (variable costs, fixed costs and total costs) underestimate the true costs of operating a business.

4.1 Fixed costs

Buildings and processing equipment costs

Table 4.1: Buildings and processing equipment costs for EDC Processors. Capitalized expenditures on facilities, capitalized expenditures on machinery and equipment, processing equipment expenses, rental or lease payments on facilities or equipment, and repair and maintenance expenses (thousands of $) (N = number of EDC Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Buildings	$474.0	13	$512.5	13	$333.6	10	$184.6	13	$85.4	10	$179.7	13	$574.5	10	$365.8	11
Machinery and equipment	$1,121.1	19	$1,236.1	18	$564.1	18	$299.3	20	$409.1	18	$538.9	18	$464.4	16	$821.8	16
Processing equipment	$34.9	14	$34.7	16	$32.8	19	$53.5	14	$61.3	14	$66.6	15	$83.2	12	$99.7	14
Lease payments	$125.2	19	$125.4	21	$134.0	23	$143.0	23	$193.6	22	$177.6	22	$202.8	21	$209.2	22
Repair and maintenance	$249.1	19	$250.1	20	$252.5	24	$268.6	23	$316.1	22	$372.6	22	$337.6	21	$270.0	23

4.2 Variable costs

Labor expenses

Labor expenses include wages, bonuses, benefits, payroll taxes, and unemployment insurance.

Table 4.2: Employment expenses for EDC Processors. Total annual labor expenses for all employees (millions of $) (includes wages, bonuses, benefits, payroll taxes, and unemployment insurance) (N = number of EDC Processors with non-zero, non-NA responses).

Employee Type	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Production	$1.65	19	$1.40	21	$1.93	24	$2.07	23	$2.48	22	$2.36	22	$2.35	21	$2.50	22
Non-production	$0.49	18	$0.48	21	$0.50	24	$0.55	24	$0.59	23	$0.70	23	$0.71	22	$0.60	23

Quota expenses

Many respondents did not provide information on quota expenses either because they did not incur this expense or because that information was not available (Table 4.3).

Table 4.3: Quota expenses for EDC Processors. Expenses on leasing and purchasing quota pounds and quota shares (thousands of $) (N = number of EDC Processors with non-zero, non-NA responses).

Expense	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Purchase of quota shares		0		0	***	***		0		0		0		0		0
Purchase of quota pounds		0		0	***	***	***	***	***	***	***	***	***	***	***	***
Lease of quota shares		0		0		0		0		0		0		0		0
Lease of quota pounds		0		0		0	$66.6	3	$223.8	3	$118.6	3	$40.2	3	***	***

Utility expenses

Utility expenses include electricity, natural gas, nitrogen gas, propane gas, water, and sewer, waste, and byproduct disposal (Table 4.4).

Table 4.4: Utility expenses for EDC Processors. Utility expenses include electricity, gas, water, and waste disposal (thousands of $) (N = number of EDC Processors with non-zero, non-NA responses).

Expense	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Electricity	$187.7	19	$180.6	21	$184.3	24	$225.8	22	$237.1	22	$243.6	22	$263.0	21	$259.3	22
Natural gas	$85.0	11	$78.8	11	$31.2	11	$33.5	10	$31.9	10	$30.4	10	$24.5	10	$21.7	10
Nitrogen gas	—	—	—	—	***	***	***	***	$197.5	3	$184.4	3	$213.7	3	***	***
Propane gas	$28.1	15	$49.8	17	$40.4	20	$33.8	20	$32.9	19	$35.8	17	$21.5	17	$21.2	17
Water	$76.6	19	$89.3	21	$99.5	24	$113.9	23	$136.7	22	$130.8	22	$136.1	21	$134.7	21
Sewer, waste, byproduct disposal	$40.2	18	$41.9	19	$51.2	23	$72.0	19	$85.6	19	$82.5	19	$80.3	20	$61.6	20

Other expenses

Other expenses include cleaning and production supplies, freight costs, packing materials, etc. Some new categories were added in 2011 reflecting feedback on the baseline 2009-2010 surveys. Therefore, information on these spending categories is only available for 2011 onward (Table 4.5).

Table 4.5: Other expenses for EDC Processors. Other facility and operational expenses such as supplies, freight costs, insurance (including property, product and personal liability), non-fish ingredients (additives), offloading, monitoring, and taxes (property and excise) (thousands of $) (N = number of EDC Processors with non-zero, non-NA responses).

Expense	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Cleaning and custodial supplies	—	—	—	—	$19.6⁝	20	$25.4⁝	20	$34.4⁝	18	$34.2⁝	19	$43.4⁝	17	$34.7⁝	18
Freight costs for supplies	$187.0⁝	9	$172.4⁝	10	$191.5⁝	8	$224.4⁝	10	$348.3⁝	11	$383.0⁝	11	$299.0⁝	17	$384.7⁝	16
Insurance	$153.3⁚	19	$136.4⁝	21	$80.0⁝	24	$76.1⁚	23	$100.9⁚	22	$104.0⁚	22	$104.8⁚	22	$97.4⁝	23
Licensing fees	—	—	—	—	$13.1⁚	22	$14.4⁚	23	$21.3⁝	21	$16.9⁚	23	$20.7⁝	21	$19.0⁚	23
Non-fish ingredients (additives)	$71.7⁝	10	$61.5⁝	11	$114.3⁝	13	$185.7⁝	14	$144.8⁝	13	$195.4⁝	13	$175.6⁝	15	$151.2⁝	15
Off-site product freezing and storage	$195.8⁝	16	$216.4⁝	17	$357.0⁝	17	$488.0⁚	17	$622.1⁝	17	$572.6⁝	17	$421.2⁝	17	$695.3⁝	17
Offloading	—	—	—	—	$56.0⁝	13	$99.0⁝	15	$164.3⁚	11	$93.7⁚	14	$61.4⁝	15	$130.4⁝	14
Packing materials	$660.3⁝	19	$526.7⁝	21	$542.0⁝	24	$535.7⁝	24	$605.4⁝	22	$575.7⁝	23	$470.9⁝	22	$446.1⁝	22
Production supplies	$120.6⁝	18	$122.9⁝	20	$59.7⁝	23	$78.4⁝	22	$105.4⁝	20	$108.5⁝	22	$93.0⁝	21	$128.1⁝	21
Shoreside monitoring	$15.1⁚	12	$40.2·	11	$7.8⁝	15	$8.8⁝	16	$16.9⁚	18	$18.2⁝	19	$35.0⁝	18	$38.9⁝	19
Taxes (property and excise)	—	—	—	—	$60.8⁝	22	$68.2⁝	22	$88.3⁝	21	$73.9⁝	22	$117.1⁝	21	$127.7⁝	23
Other	$568.9⁝	7	$759.7⁝	8	$504.6⁝	7	***	***	$845.7⁝	9	$675.6⁝	9	$401.9⁝	8	$321.5⁝	6

Custom processing

Custom processing is when a third party processes fish owned by the respondent, and the processing occurring outside the facility responding to the EDC form (Table 4.6).

Table 4.6: Custom processing for EDC Processors. Cost (thousands of $) and weight (thousands of lbs) of custom processing activities (N = number of EDC Processors with non-zero, non-NA responses).

Species group	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Whiting ($)	284.2⁝	3	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Non-whiting groundfish ($)	432.4⁝	3	140.2⁝	3	***	***	***	***	***	***	***	***	181.0⁝	3	***	***
Other ($)	453.2·	3	326.4⁝	4	232.2⁝	4	150.7⁝	4	261.1⁝	3	185.1⁝	4	220.0⁝	4	178.5⁝	4
Whiting (lbs)	1,290.3⁝	3	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Non-whiting groundfish (lbs)	1,359.9⁝	3	460.7⁝	3	***	***	***	***	***	***	***	***	714.3⁝	3	***	***
Other (lbs)	2,067.5⁝	3	1,401.4⁝	4	988.5⁝	3	84.5·	3	1,496.1⁝	3	***	***	387.5⁝	4	***	***

4.3 Fish purchases

Respondents are asked to provide the weight and cost of fish received during the survey year. This includes: 1) the weight of fish paid for; 2) the weight of those not paid for due to size or quality reasons; and 3) the weight of fish not paid for due to intra-company transfers.

The cost of fish from vessel or non-vessel sources includes the value of any taxes paid on behalf of delivering vessels. Purchase weight and cost information is requested by categories for different species types and sources. For catch share species, the fish source categories are: 1) Limited Entry (LE) Trawl; 2) LE Fixed Gear; 3) Other vessels; and 4) Non-vessel sources. For non-catch share species, the fish source categories are: 1) Vessel sources; and 2) Non-vessel sources. LE Trawl represents fish acquired directly from a vessel registered to a LE permit with a trawl endorsement and caught with either trawl or fixed gear. LE Fixed Gear represents fish acquired directly from a vessel with a fixed gear endorsement. This does not include fish caught with fixed gear on a LE permit with a trawl endorsement, i.e., the gear switching provision of the catch share program, which are included under LE trawl. Other vessels are those without either a LE Trawl or LE Fixed Gear endorsement. Non-vessel sources include fish acquired from other entities, including other first receivers, processors, wholesale dealers, brokers, aquaculture producers, and transfers from outside the facility.

Fish that are not paid for are excluded from the tables in this section. This includes fish recorded as having zero value due to size or quality reasons, as well as fish that are received for custom processing. The tables do include post season adjustments and fish purchased that are then custom processed by another processor outside the facility. As stated in the introduction to this report, respondents fill out the EDC form according to their fiscal year, so pounds listed for each species may not have been purchased during the calendar year indicated by the column header, and therefore these values may not align directly to state fish ticket data.

4.4 Total cost and weight of fish purchases by species

Table 4.7: Total purchases by EDC Processors of Pacific whiting, Dover sole, Sablefish, Thornyheads, English sole,and Petrale sole Total purchase weight (thousands of lbs) and cost (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Pacific whiting: $	12,745.5	12	9,069.8	13	24,011.8	11	19,445.2	11	29,017.7	11	25,844.4	12	10,563.8	10	13,381.5	11
Pacific whiting: lbs	117,629.3	12	108,338.9	13	224,236.3	11	139,749.2	11	226,115.0	11	219,037.4	12	130,052.3	10	179,732.9	11
Dover sole: $	8,848.4	16	7,188.6	17	6,728.0	16	7,211.5	19	8,670.5	16	6,761.7	16	6,564.8	17	7,794.6	19
Dover sole: lbs	25,300.9	16	22,272.9	17	15,623.7	16	16,417.1	19	18,494.2	16	13,978.7	16	13,960.9	17	17,261.3	19
Sablefish: $	25,826.9	18	25,407.0	20	30,088.5	26	23,680.0	26	17,043.3	23	20,127.6	22	26,268.6	24	29,269.7	24
Sablefish: lbs	10,581.8	18	9,968.1	20	8,261.6	26	8,006.7	26	6,896.9	23	6,350.7	22	8,188.5	24	8,497.3	24
Thornyheads: $	2,585.4	15	2,484.5	16	1,812.3	21	2,196.8	20	2,909.5	18	2,350.1	18	2,208.2	19	2,085.6	19
Thornyheads: lbs	4,973.9	15	4,629.0	16	2,837.7	21	3,552.9	20	4,456.3	18	3,449.0	18	3,385.1	19	3,162.2	19
English sole: $	271.6	13	154.3	15	121.4	14	158.6	18	283.7	17	235.9	14	272.3	15	411.7	16
English sole: lbs	779.3	13	470.5	15	283.1	14	430.5	18	801.3	17	584.3	14	727.9	15	971.7	16
Petrale sole: $	3,685.7	14	1,989.4	19	2,632.6	18	4,164.6	18	6,742.4	20	7,099.3	17	7,968.4	21	7,670.1	21
Petrale sole: lbs	4,381.0	14	1,648.5	19	1,747.4	18	2,728.8	18	5,075.7	20	6,012.8	17	6,327.6	21	6,048.2	21

Table 4.8: Total purchases by EDC Processors of Rex sole, Arrowtooth flounder, Lingcod, Rockfish, Sanddab and Sharks, skates and rays. Total purchase weight (thousands of lbs) and cost (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Rex sole: $	440.1	16	376.9	15	334.0	15	476.5	17	457.8	15	384.3	13	420.3	15	516.0	15
Rex sole: lbs	1,201.6	16	1,006.9	15	773.5	15	1,020.8	17	1,134.5	15	947.6	13	1,079.8	15	1,423.8	15
Arrowtooth flounder: $	—	—	—	—	479.1	12	749.5	15	581.3	15	325.4	13	306.7	14	246.5	13
Arrowtooth flounder: lbs	—	—	—	—	4,239.9	12	5,368.1	15	4,608.5	15	2,780.4	13	2,933.9	14	2,350.2	14
Lingcod: $	277.0	19	205.2	19	527.9	23	742.5	22	802.6	22	599.7	22	685.1	22	811.2	22
Lingcod: lbs	344.7	19	237.3	19	627.8	23	928.6	22	947.6	22	605.3	22	535.8	22	714.9	22
Rockfish: $	2,868.5	21	2,454.6	21	3,379.6	28	4,108.6	25	3,742.0	24	3,973.0	23	4,912.8	24	4,010.0	23
Rockfish: lbs	3,647.1	21	3,858.7	21	4,895.2	28	6,050.4	25	5,765.4	24	6,300.3	23	8,014.4	24	7,623.0	23
Sanddab: $	—	—	—	—	197.0	13	181.3	14	266.3	13	316.6	14	205.8	13	161.6	13
Sanddab: lbs	—	—	—	—	330.9	13	317.1	14	460.0	13	543.4	14	339.2	13	207.8	13
Sharks, skates and rays: $	672.6	16	833.9	16	917.9	20	1,122.9	19	1,038.8	18	1,392.9	18	1,108.1	17	1,164.6	18
Sharks, skates and rays: lbs	2,999.3	16	3,030.0	16	2,724.3	20	2,742.7	19	2,503.5	18	2,976.0	18	2,389.0	17	2,868.5	18

Table 4.9: Total purchases by EDC Processors of Crab, Shrimp, Coastal pelagics, Salmon, Tuna, California halibut, Pacific halibut and Other. Total purchase weight (thousands of lbs) and cost (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Crab: $	38,930.6	16	72,602.9	20	72,559.7	24	83,874.2	25	94,495.3	26	83,253.5	24	54,820.1	22	114,429.9	25
Crab: lbs	19,199.8	16	36,337.2	20	29,974.1	24	28,383.7	25	35,189.7	26	24,689.7	24	12,948.2	22	33,324.3	25
Shrimp: $	11,962.7	10	16,211.1	12	29,597.7	13	29,995.8	15	31,625.3	13	46,417.3	15	66,811.6	18	34,200.8	15
Shrimp: lbs	32,020.4	10	43,764.5	12	56,440.6	13	56,257.4	15	57,937.7	13	77,428.9	15	86,996.8	18	47,819.5	15
Coastal pelagics: $	5,376.3	9	5,279.1	8	5,064.3	16	15,340.0	11	8,847.0	10	5,063.3	10	550.4	9	1,117.5	8
Coastal pelagics: lbs	47,657.3	9	46,131.6	8	39,679.8	16	146,135.0	11	75,241.5	10	28,562.1	10	3,399.2	9	10,911.4	8
Salmon: $	6,169.6	11	16,018.4	15	20,242.7	20	14,301.1	19	31,544.7	20	33,674.7	20	19,421.2	20	12,157.8	20
Salmon: lbs	4,822.4	10	6,518.3	15	10,730.5	20	5,122.8	19	14,900.7	20	11,383.3	20	7,467.1	20	4,638.1	20
Tuna: $	9,037.3	12	12,754.0	16	14,566.8	21	22,586.6	19	15,693.1	18	12,076.5	15	9,522.3	16	13,972.0	15
Tuna: lbs	8,609.1	12	10,407.9	16	7,170.4	21	14,164.8	19	9,460.3	18	9,173.9	15	7,701.5	16	7,355.9	15
California halibut: $	568.5	5	687.8	9	1,334.7	10	585.8	9	842.3	10	805.4	9	911.1	7	1,157.5	8
California halibut: lbs	117.9	5	148.7	9	273.6	10	122.4	9	169.4	10	154.1	9	187.4	7	228.9	8
Pacific halibut: $	2,417.1	7	1,894.5	9	2,323.1	11	4,138.4	9	3,615.9	9	4,252.2	9	4,895.4	11	5,608.5	10
Pacific halibut: lbs	517.4	7	272.3	9	312.1	11	664.5	9	589.5	9	633.8	9	681.7	11	762.3	10
Other: $	8,707.7	19	10,283.1	21	12,790.7	24	15,373.3	21	19,727.4	18	13,902.6	19	12,388.5	17	19,811.4	23
Other: lbs	12,903.5	19	18,946.8	21	10,501.6	24	23,307.2	21	31,141.1	17	11,471.2	19	7,405.7	17	19,693.1	23

4.5 Average cost and weight of fish purchases by species

Table 4.10: Average purchases by EDC Processors of Pacific whiting, Dover sole, Sablefish, Thornyheads, English sole and Petrale sole. Average purchase weight (thousands of lbs) and cost (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Pacific whiting: $	1,062.1	12	697.7	13	2,182.9	11	1,767.7	11	2,638.0	11	2,153.7	12	1,056.4	10	1,216.5	11
Pacific whiting: lbs	9,802.4	12	8,333.8	13	20,385.1	11	12,704.5	11	20,555.9	11	18,253.1	12	13,005.2	10	16,339.4	11
Dover sole: $	553.0	16	422.9	17	420.5	16	379.6	19	541.9	16	422.6	16	386.2	17	410.2	19
Dover sole: lbs	1,581.3	16	1,310.2	17	976.5	16	864.1	19	1,155.9	16	873.7	16	821.2	17	908.5	19
Sablefish: $	1,434.8	18	1,270.3	20	1,157.2	26	910.8	26	741.0	23	914.9	22	1,094.5	24	1,219.6	24
Sablefish: lbs	587.9	18	498.4	20	317.8	26	308.0	26	299.9	23	288.7	22	341.2	24	354.1	24
Thornyheads: $	172.4	15	155.3	16	86.3	21	109.8	20	161.6	18	130.6	18	116.2	19	109.8	19
Thornyheads: lbs	331.6	15	289.3	16	135.1	21	177.6	20	247.6	18	191.6	18	178.2	19	166.4	19
English sole: $	20.9	13	10.3	15	8.7	14	8.8	18	16.7	17	16.9	14	18.2	15	25.7	16
English sole: lbs	59.9	13	31.4	15	20.2	14	23.9	18	47.1	17	41.7	14	48.5	15	60.7	16
Petrale sole: $	263.3	14	104.7	19	146.3	18	231.4	18	337.1	20	417.6	17	379.4	21	365.2	21
Petrale sole: lbs	312.9	14	86.8	19	97.1	18	151.6	18	253.8	20	353.7	17	301.3	21	288.0	21

Table 4.11: Average purchases by EDC Processors of Rex sole, Arrowtooth flounder, Lingcod, Rockfish, Sanddab and Sharks, skates and rays. Average purchase weight (thousands of lbs) and cost (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Rex sole: $	27.5⁞	16	25.1⁞	15	22.3⁞	15	28.0⁞	17	30.5⁞	15	29.6⁞	13	28.0⁞	15	34.4⁞	15
Rex sole: lbs	75.1⁞	16	67.1⁞	15	51.6⁞	15	60.0⁞	17	75.6⁞	15	72.9⁞	13	72.0⁞	15	94.9⁞	15
Arrowtooth flounder: $	—	—	—	—	39.9⁞	12	50.0⁞	15	38.8⁞	15	25.0⁞	13	21.9⁞	14	19.0⁞	13
Arrowtooth flounder: lbs	—	—	—	—	353.3⁞	12	357.9⁞	15	307.2⁞	15	213.9⁞	13	209.6⁞	14	167.9⁞	14
Lingcod: $	14.6⁞	19	10.8⁞	19	23.0⁞	23	33.8⁞	22	36.5⁞	22	27.3⁞	22	31.1⁞	22	36.9⁞	22
Lingcod: lbs	18.1⁞	19	12.5⁞	19	27.3⁞	23	42.2⁞	22	43.1⁞	22	27.5⁞	22	24.4⁞	22	32.5⁞	22
Rockfish: $	136.6⁞	21	116.9⁞	21	120.7⁞	28	164.3⁞	25	155.9⁞	24	172.7⁞	23	204.7⁞	24	174.3⁞	23
Rockfish: lbs	173.7⁞	21	183.7⁞	21	174.8⁞	28	242.0⁞	25	240.2⁞	24	273.9⁞	23	333.9⁞	24	331.4⁞	23
Sanddab: $	—	—	—	—	15.2⁞	13	12.9⁞	14	20.5⁞	13	22.6⁞	14	15.8⁞	13	12.4⁞	13
Sanddab: lbs	—	—	—	—	25.5⁞	13	22.6⁞	14	35.4⁞	13	38.8⁞	14	26.1⁞	13	16.0⁞	13
Sharks, skates and rays: $	42.0⁞	16	52.1⁞	16	45.9⁞	20	59.1⁞	19	57.7⁞	18	77.4⁞	18	65.2⁞	17	64.7⁞	18
Sharks, skates and rays: lbs	187.5⁞	16	189.4⁞	16	136.2⁞	20	144.4⁞	19	139.1⁞	18	165.3⁞	18	140.5⁞	17	159.4⁞	18

Table 4.12: Average purchases by EDC Processors of Crab, Shrimp, Coastal pelagics, Salmon, Tuna, California halibut, Pacific halibut and Other. Average purchase weight (thousands of lbs) and cost (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Crab: $	2,433.2	16	3,630.1	20	3,023.3	24	3,355.0	25	3,634.4	26	3,468.9	24	2,491.8	22	4,577.2	25
Crab: lbs	1,200.0	16	1,816.9	20	1,248.9	24	1,135.3	25	1,353.5	26	1,028.7	24	588.6	22	1,333.0	25
Shrimp: $	1,196.3	10	1,350.9	12	2,276.7	13	1,999.7	15	2,432.7	13	3,094.5	15	3,711.8	18	2,280.1	15
Shrimp: lbs	3,202.0	10	3,647.0	12	4,341.6	13	3,750.5	15	4,456.7	13	5,161.9	15	4,833.2	18	3,188.0	15
Coastal pelagics: $	597.4	9	659.9	8	316.5	16	1,394.5	11	884.7	10	506.3	10	61.2	9	139.7	8
Coastal pelagics: lbs	5,295.3	9	5,766.5	8	2,480.0	16	13,285.0	11	7,524.2	10	2,856.2	10	377.7	9	1,363.9	8
Salmon: $	560.9	11	1,067.9	15	1,012.1	20	752.7	19	1,577.2	20	1,683.7	20	971.1	20	607.9	20
Salmon: lbs	482.2	10	434.6	15	536.5	20	269.6	19	745.0	20	569.2	20	373.4	20	231.9	20
Tuna: $	753.1	12	797.1	16	693.7	21	1,188.8	19	871.8	18	805.1	15	595.1	16	931.5	15
Tuna: lbs	717.4	12	650.5	16	341.4	21	745.5	19	525.6	18	611.6	15	481.3	16	490.4	15
California halibut: $	113.7	5	76.4	9	133.5	10	65.1	9	84.2	10	89.5	9	130.2	7	144.7	8
California halibut: lbs	23.6	5	16.5	9	27.4	10	13.6	9	16.9	10	17.1	9	26.8	7	28.6	8
Pacific halibut: $	345.3	7	210.5	9	211.2	11	459.8	9	401.8	9	472.5	9	445.0	11	560.9	10
Pacific halibut: lbs	73.9	7	30.3	9	28.4	11	73.8	9	65.5	9	70.4	9	62.0	11	76.2	10
Other: $	458.3	19	489.7	21	532.9	24	732.1	21	1,096.0	18	731.7	19	728.7	17	861.4	23
Other: lbs	679.1	19	902.2	21	437.6	24	1,109.9	21	1,831.8	17	603.7	19	435.6	17	856.2	23

4.6 Total cost and weight of fish purchases by source and species

Table 4.13: Pacific whiting: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Pacific whiting (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	6,923.1	12	8,550.9	12	22,657.0	10	18,880.2	9	27,498.3	10	25,645.2	11	10,464.9	10	13,206.5	11
LE Trawl: lbs	88,683.6	12	102,130.2	12	204,027.8	10	133,564.3	9	213,574.3	10	215,911.9	11	127,164.9	10	175,391.4	11
LE Fixed Gear: $	—	—	—	—	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	***	***
LE Fixed Gear: lbs	—	—	—	—	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	***	***
Fixed Gear: $	0.0	0	0.0	0	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	0.0	0	0.0	0	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	***	***	***	***	***	***	***	***	***	***	***	***
Other Vessel: lbs	—	—	—	—	***	***	***	***	***	***	***	***	2,676.5	3	***	***
Other: $	***	***	519.0	5	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	28,945.7	4	6,208.7	4	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	***	***	90.6	3	***	***	***	***	***	***	***	***
Non-vessel: lbs	—	—	—	—	***	***	545.7	3	***	***	***	***	***	***	***	***

Table 4.14: Dover sole: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Dover sole (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	8,195.4	14	6,796.0	13	6,567.3	13	6,394.9	13	7,826.1	14	6,299.1	13	6,127.4	15	5,658.6	14
LE Trawl: lbs	23,430.3	14	21,160.2	13	15,364.8	13	14,445.0	13	16,978.7	14	13,141.2	13	13,083.6	15	12,981.8	14
LE Fixed Gear: $	—	—	—	—	***	***	***	***	1.2	7	0.7	7	0.4	6	5.2	7
LE Fixed Gear: lbs	—	—	—	—	***	***	***	***	3.3	7	1.5	7	0.9	6	11.7	7
Fixed Gear: $	6.7	6	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	16.9	6	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	13.1	4	***	***	0.8	4	0.2	3	20.6	5	21.5	5
Other Vessel: lbs	—	—	—	—	***	***	***	***	1.3	4	0.7	3	45.9	5	48.0	5
Other: $	***	***	263.0	4	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	653.1	4	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	147.4	4	587.8	6	842.4	6	461.6	7	416.1	4	1,449.9	6
Non-vessel: lbs	—	—	—	—	***	***	1,290.8	6	1,510.9	6	835.2	7	829.8	4	2,729.2	6

Table 4.15: Sablefish: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Sablefish (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	11,989.1	15	9,694.9	16	8,335.2	15	8,590.1	17	7,010.5	16	7,151.8	16	9,953.3	18	11,032.8	18
LE Trawl: lbs	5,748.9	15	4,423.6	16	2,790.5	15	3,609.4	17	3,331.2	16	2,689.5	16	3,744.3	18	3,918.8	18
LE Fixed Gear: $	—	—	—	—	11,481.5	12	7,078.5	11	5,604.2	12	5,663.3	12	10,682.6	13	10,834.8	10
LE Fixed Gear: lbs	—	—	—	—	2,959.7	12	2,158.4	11	2,069.3	12	1,712.6	12	2,773.2	13	2,731.5	10
Fixed Gear: $	10,857.0	10	11,694.5	12	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	3,576.2	10	3,675.5	12	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	8,584.8	5	4,782.6	9	1,633.8	9	2,449.4	8	3,316.0	10	2,558.6	8
Other Vessel: lbs	—	—	—	—	1,617.3	6	1,153.7	9	503.8	9	619.7	8	874.4	10	626.5	8
Other: $	2,435.3	4	3,604.7	5	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	1,015.7	4	1,705.4	5	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	1,003.4	4	3,123.9	9	2,734.4	6	4,786.3	8	2,121.6	9	4,125.1	6
Non-vessel: lbs	—	—	—	—	615.3	4	1,004.2	9	940.7	6	1,251.6	8	652.9	9	935.2	6

Table 4.16: Thornyheads: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Thornyheads (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	2,455.5	13	2,330.4	13	1,564.0	15	1,770.9	15	2,528.6	17	2,025.2	14	1,907.3	17	1,549.2	16
LE Trawl: lbs	4,804.2	13	4,308.2	13	2,637.3	15	2,981.1	15	3,886.9	17	3,037.2	14	3,002.7	17	2,329.8	16
LE Fixed Gear: $	—	—	—	—	137.1	8	141.7	10	81.9	8	95.2	9	143.7	10	93.8	10
LE Fixed Gear: lbs	—	—	—	—	134.2	8	83.7	10	32.1	8	58.4	9	***	***	42.4	10
Fixed Gear: $	5.9	6	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	7.6	6	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	6.2	4	44.5	7	10.5	5	2.2	5	9.0	5	6.6	6
Other Vessel: lbs	—	—	—	—	7.2	4	56.1	7	3.5	5	1.9	6	15.2	5	9.1	6
Other: $	***	***	0.0	0	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	***	***	223.7	3	288.5	4	227.5	5	148.0	4	230.1	5
Non-vessel: lbs	—	—	—	—	***	***	408.5	3	533.8	4	351.6	5	258.1	4	454.1	5

Table 4.17: English sole: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for English sole (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	159.0	11	96.1	11	68.9	9	86.1	13	141.8	13	156.6	13	185.3	12	246.0	12
LE Trawl: lbs	505.4	11	301.4	11	145.0	9	241.4	13	411.7	13	415.8	13	534.8	12	633.7	12
LE Fixed Gear: $	—	—	—	—	0.0	0	0.0	0	0.0	0	0.0	0	***	***	***	***
LE Fixed Gear: lbs	—	—	—	—	0.0	0	0.0	0	0.0	0	***	***	***	***	***	***
Fixed Gear: $	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	***	***	***	***	***	***	0.0	0	0.3	4	***	***
Other Vessel: lbs	—	—	—	—	***	***	***	***	***	***	0.0	0	0.8	4	***	***
Other: $	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	***	***	13.3	5	132.3	7	70.8	5	***	***	***	***
Non-vessel: lbs	—	—	—	—	***	***	28.8	6	368.8	7	147.2	5	***	***	291.9	3

Table 4.18: Petrale sole: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Petrale sole (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	2,998.8	11	1,657.2	13	1,983.9	11	3,224.7	12	5,183.4	16	5,597.4	13	6,405.2	14	5,888.4	15
LE Trawl: lbs	3,779.6	11	1,439.6	13	1,370.5	11	2,113.5	12	3,928.4	16	4,814.6	13	5,202.8	14	4,774.3	15
LE Fixed Gear: $	—	—	—	—	***	***	***	***	0.2	5	0.2	5	***	***	23.3	6
LE Fixed Gear: lbs	—	—	—	—	***	***	***	***	0.1	5	0.2	5	***	***	16.2	7
Fixed Gear: $	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	0.2	3	***	***	***	***	0.1	3	6.6	6	***	***
Other Vessel: lbs	—	—	—	—	0.2	3	***	***	***	***	0.2	3	5.4	6	***	***
Other: $	507.0	4	258.5	3	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	398.5	4	148.6	3	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	586.3	5	666.5	5	1,465.1	6	1,352.0	7	1,395.8	6	1,419.9	5
Non-vessel: lbs	—	—	—	—	327.3	5	423.0	5	1,065.7	6	1,056.4	7	971.1	6	954.2	5

Table 4.19: Rex sole: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Rex sole (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	367.0	14	306.0	12	271.2	13	391.5	14	361.9	13	308.6	12	361.0	14	346.7	13
LE Trawl: lbs	1,070.7	14	924.9	12	733.7	13	811.8	14	915.2	13	767.4	12	935.8	14	911.5	13
LE Fixed Gear: $	—	—	—	—	0.0	0	0.0	0	***	***	0.0	0	***	***	***	***
LE Fixed Gear: lbs	—	—	—	—	0.0	0	0.0	0	***	***	0.0	0	***	***	***	***
Fixed Gear: $	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	1.8	3	***	***	0.1	4	0.0	0	4.1	4	5.0	3
Other Vessel: lbs	—	—	—	—	5.1	3	***	***	0.2	4	0.0	0	10.1	4	12.4	3
Other: $	63.8	3	67.3	3	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	70.6	3	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	60.8	4	53.3	4	95.8	7	75.7	5	54.9	3	137.5	3
Non-vessel: lbs	—	—	—	—	34.6	4	122.8	4	219.1	7	180.2	5	132.9	3	432.9	3

Table 4.20: Arrowtooth flounder: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Arrowtooth flounder (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	—	—	—	—	420.1	11	525.2	13	458.2	11	293.9	11	285.8	11	228.5	9
LE Trawl: lbs	—	—	—	—	4,110.7	11	4,204.4	13	4,211.1	11	2,629.4	11	2,788.7	11	2,245.4	10
LE Fixed Gear: $	—	—	—	—	***	***	0.3	5	0.6	5	0.2	5	0.3	4	0.5	4
LE Fixed Gear: lbs	—	—	—	—	***	***	2.3	5	4.1	5	1.3	5	0.5	4	4.9	5
Other Vessel: $	—	—	—	—	1.0	3	***	***	0.6	5	***	***	0.5	4	1.7	3
Other Vessel: lbs	—	—	—	—	9.5	3	***	***	8.8	6	2.8	3	5.2	4	16.9	3
Non-vessel: $	—	—	—	—	***	***	207.9	4	117.7	5	16.8	3	13.5	3	11.3	3
Non-vessel: lbs	—	—	—	—	***	***	***	***	380.1	5	133.2	3	132.4	3	75.1	3

Table 4.21: Lingcod: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Lingcod (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	152.3	15	92.4	14	357.4	17	455.8	17	451.5	17	384.4	17	383.1	16	561.6	16
LE Trawl: lbs	236.1	15	136.1	14	456.6	17	610.6	17	603.2	17	485.6	17	375.8	16	546.7	16
LE Fixed Gear: $	—	—	—	—	3.0	6	5.9	6	13.7	10	13.8	8	62.3	10	29.7	10
LE Fixed Gear: lbs	—	—	—	—	3.4	6	7.5	6	8.9	10	7.1	8	41.3	10	20.6	10
Fixed Gear: $	10.1	7	8.3	6	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	12.2	7	10.0	6	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	13.4	4	68.1	7	20.1	8	58.7	7	70.4	8	53.2	7
Other Vessel: lbs	—	—	—	—	13.0	4	79.8	7	13.4	8	21.3	7	36.6	8	31.7	7
Other: $	105.9	3	98.9	5	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	83.6	3	84.3	5	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	152.4	7	211.7	6	317.0	7	142.1	7	165.3	7	157.2	7
Non-vessel: lbs	—	—	—	—	153.8	7	229.6	6	321.8	7	90.6	7	79.1	7	106.2	7

Table 4.22: Rockfish: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Rockfish (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	1,426.1	18	884.1	15	1,513.1	18	2,019.8	17	2,143.1	19	2,475.2	18	2,998.2	17	2,503.5	18
LE Trawl: lbs	2,062.8	18	1,709.8	15	2,814.3	18	3,615.0	17	3,873.2	19	4,639.5	18	6,101.5	17	5,407.3	18
LE Fixed Gear: $	—	—	—	—	67.7	8	113.5	10	85.5	9	85.0	10	206.7	12	166.7	11
LE Fixed Gear: lbs	—	—	—	—	69.1	8	106.3	10	82.3	9	55.0	10	147.3	12	121.0	11
Fixed Gear: $	69.4	6	176.3	9	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	105.6	6	212.1	9	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	95.0	5	816.0	8	340.6	7	365.4	8	576.1	8	278.9	8
Other Vessel: lbs	—	—	—	—	89.4	5	***	***	161.4	7	103.5	8	123.3	8	87.7	8
Other: $	1,283.4	5	1,329.6	5	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	1,837.1	5	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	1,637.3	7	1,101.7	6	1,136.7	7	1,032.5	9	1,118.9	9	1,035.5	8
Non-vessel: lbs	—	—	—	—	1,812.3	7	952.8	6	1,577.9	7	1,482.4	9	1,613.4	9	1,955.4	8

Table 4.23: Sanddab: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Sanddab (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	—	—	—	—	164.8	7	135.6	8	176.8	9	230.4	10	147.7	9	78.6	10
LE Trawl: lbs	—	—	—	—	284.1	7	229.9	8	305.2	9	404.4	10	257.3	9	137.1	10
LE Fixed Gear: $	—	—	—	—	0.0	0	0.0	0	0.0	0	0.0	0	***	***	***	***
LE Fixed Gear: lbs	—	—	—	—	0.0	0	0.0	0	0.0	0	0.0	0	***	***	***	***
Other Vessel: $	—	—	—	—	***	***	***	***	0.0	0	***	***	0.0	0	***	***
Other Vessel: lbs	—	—	—	—	***	***	***	***	0.0	0	***	***	0.0	0	***	***
Non-vessel: $	—	—	—	—	7.5	4	5.8	5	22.5	7	33.2	5	22.9	4	***	***
Non-vessel: lbs	—	—	—	—	3.0	4	7.3	5	20.9	7	33.7	5	11.8	4	***	***

Table 4.24: Sharks, skates and rays: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Sharks, skates and rays (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
LE Trawl: $	494.0	12	731.0	11	802.1	12	943.6	13	835.7	13	1,003.8	12	936.7	12	998.4	11
LE Trawl: lbs	2,527.5	12	2,833.1	11	2,588.2	12	2,285.3	13	2,085.7	13	2,389.1	12	2,089.0	12	2,553.5	11
LE Fixed Gear: $	—	—	—	—	31.9	4	20.7	7	20.7	8	10.4	6	17.0	8	16.8	10
LE Fixed Gear: lbs	—	—	—	—	21.1	4	52.8	7	51.0	8	31.8	6	50.1	8	46.0	10
Fixed Gear: $	9.0	6	15.5	3	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	41.2	6	57.1	3	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	54.3	6	60.9	6	15.2	6	23.3	6	50.7	7	31.2	5
Other Vessel: lbs	—	—	—	—	87.5	6	184.0	6	69.9	6	52.1	6	56.1	7	45.7	5
Other: $	143.3	3	80.4	3	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	94.5	3	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	24.8	4	93.7	6	165.4	6	352.7	8	102.3	5	95.6	5
Non-vessel: lbs	—	—	—	—	18.6	4	204.5	6	289.5	6	494.7	8	188.7	5	167.2	5

Table 4.25: Crab: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Crab (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
All: $	28,750.8	15	57,799.0	18	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	15,738.8	15	31,145.1	18	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	62,833.0	19	61,293.0	18	75,692.5	19	69,496.9	20	37,136.1	17	81,234.5	20
Vessel: lbs	—	—	—	—	26,082.7	19	20,670.8	18	29,097.4	19	20,989.1	20	9,863.5	17	25,353.8	20
Non-vessel: $	—	—	—	—	7,358.8	8	20,553.5	11	15,935.6	9	11,916.9	9	16,978.6	10	25,701.5	11
Non-vessel: lbs	—	—	—	—	2,897.4	8	7,042.1	11	5,218.5	9	3,166.4	9	2,953.0	10	5,878.1	11

Table 4.26: Shrimp: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Shrimp (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
All: $	10,210.9	9	13,491.7	11	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	26,186.9	9	35,472.0	11	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	25,693.9	9	26,636.2	11	28,027.4	11	34,149.9	11	44,833.2	14	25,887.2	14
Vessel: lbs	—	—	—	—	52,814.4	9	51,935.5	11	53,875.1	11	59,307.3	11	58,207.8	14	36,434.2	14
Non-vessel: $	—	—	—	—	3,900.2	7	3,297.1	7	3,597.9	7	12,267.4	8	21,978.3	10	7,729.0	10
Non-vessel: lbs	—	—	—	—	3,625.8	7	4,191.0	7	4,062.7	7	18,121.6	8	28,789.0	10	10,626.7	10

Table 4.27: Coastal pelagics: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Coastal pelagics (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
All: $	5,376.3	9	5,279.1	8	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	47,657.3	9	46,131.6	8	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	4,605.6	11	14,993.1	9	7,964.0	8	4,986.5	7	419.7	7	829.7	5
Vessel: lbs	—	—	—	—	39,367.6	11	143,899.2	9	72,405.5	8	28,451.8	7	2,984.7	7	10,051.0	6
Non-vessel: $	—	—	—	—	458.6	7	346.9	5	883.0	5	***	***	***	***	287.8	6
Non-vessel: lbs	—	—	—	—	312.2	7	2,235.8	5	2,836.0	6	110.3	5	***	***	860.4	6

Table 4.28: Salmon: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Salmon (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
All: $	5,845.3	10	14,857.0	13	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	4,741.5	9	6,305.7	13	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	12,318.3	18	9,863.6	15	21,497.6	17	24,181.6	18	11,307.5	17	7,236.7	16
Vessel: lbs	—	—	—	—	8,411.7	18	3,366.0	15	10,826.2	17	7,891.7	18	4,358.8	17	2,472.5	16
Non-vessel: $	—	—	—	—	7,887.3	9	4,218.0	9	9,473.5	8	9,397.6	8	7,988.8	8	4,763.1	5
Non-vessel: lbs	—	—	—	—	2,313.3	9	1,718.5	9	3,988.8	8	3,475.4	8	3,086.6	8	2,133.7	5

Table 4.29: Tuna: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Tuna (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
All: $	6,797.8	10	11,105.5	14	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	6,464.6	10	8,961.4	14	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	12,112.3	17	17,443.2	16	14,023.2	16	10,258.9	13	7,768.9	12	10,101.1	11
Vessel: lbs	—	—	—	—	6,104.4	17	11,321.6	16	8,714.7	16	8,254.8	13	6,655.7	12	5,541.7	11
Non-vessel: $	—	—	—	—	1,535.2	5	***	***	743.6	5	1,817.6	6	1,270.9	6	2,350.2	7
Non-vessel: lbs	—	—	—	—	635.5	5	***	***	260.9	6	919.1	6	647.9	6	1,089.0	7

Table 4.30: California halibut: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for California halibut (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
All: $	568.5	5	682.0	8	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	117.9	5	146.4	8	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	571.9	7	326.2	6	531.4	8	541.1	8	552.0	6	693.3	7
Vessel: lbs	—	—	—	—	124.9	7	67.3	6	109.2	8	103.9	8	108.5	6	126.8	7
Non-vessel: $	—	—	—	—	547.2	5	65.0	3	***	***	124.6	3	208.7	4	***	***
Non-vessel: lbs	—	—	—	—	98.3	5	14.4	3	***	***	23.8	3	45.0	4	***	***

Table 4.31: Pacific halibut: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Pacific halibut (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
All: $	2,413.7	6	1,893.5	8	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	516.3	6	272.1	8	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	1,211.2	8	3,403.8	8	2,682.4	8	3,606.4	7	3,656.8	8	4,413.4	7
Vessel: lbs	—	—	—	—	193.8	8	544.7	8	448.6	8	497.7	7	509.3	8	600.3	7
Non-vessel: $	—	—	—	—	1,111.8	5	734.6	5	933.5	4	645.7	5	1,222.7	6	1,053.9	4
Non-vessel: lbs	—	—	—	—	118.4	5	119.8	5	140.9	4	136.0	5	169.9	6	139.9	4

Table 4.32: Other: Total purchases by source for EDC Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Other (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
All: $	8,553.2	16	10,174.6	18	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	11,969.4	16	18,419.0	18	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	3,032.0	17	5,821.1	10	11,009.4	15	2,775.1	12	2,034.3	10	7,919.3	17
Vessel: lbs	—	—	—	—	4,678.7	17	15,461.9	10	27,213.4	14	4,417.5	12	3,093.8	10	14,893.0	18
Non-vessel: $	—	—	—	—	9,072.4	10	8,937.9	15	8,718.1	9	11,117.1	13	10,348.7	11	11,880.1	10
Non-vessel: lbs	—	—	—	—	4,915.8	10	6,985.5	15	3,927.7	9	7,045.1	13	4,306.0	11	4,793.1	10

4.7 Average cost and weight of fish purchases by source and species

Table 4.33: Pacific whiting: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Pacific whiting (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	576.9⁝	12	712.6⁝	12	2,265.7⁝	10	2,097.8⁝	9	2,749.8⁝	10	2,331.4⁝	11	1,046.5⁝	10	1,200.6⁝	11
LE Trawl: lbs	7,390.3⁝	12	8,510.8⁝	12	20,402.8⁝	10	14,840.5⁝	9	21,357.4⁝	10	19,628.4⁝	11	12,716.5⁝	10	15,944.7⁝	11
LE Fixed Gear: $	—	—	—	—		0		0		0		0		0	***	***
LE Fixed Gear: lbs	—	—	—	—		0		0		0		0		0	***	***
Fixed Gear: $		0		0	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs		0		0	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	***	***	***	***	***	***	***	***	***	***	***	***
Other Vessel: lbs	—	—	—	—	***	***	***	***	***	***	***	***	892.2⁝	3	***	***
Other: $	***	***	103.8⁝	5	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	7,236.4⁝	4	1,552.2⁝	4	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	***	***	30.2⁝	3	***	***	***	***	***	***	***	***
Non-vessel: lbs	—	—	—	—	***	***	181.9⁝	3	***	***	***	***	***	***	***	***

Table 4.34: Dover sole: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Dover sole (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	585.4⁞	14	522.8⁞	13	505.2⁞	13	491.9⁞	13	559.0⁞	14	484.5⁞	13	408.5⁞	15	404.2⁞	14
LE Trawl: lbs	1,673.6⁞	14	1,627.7⁞	13	1,181.9⁞	13	1,111.2⁞	13	1,212.8⁞	14	1,010.9⁞	13	872.2⁞	15	927.3⁞	14
LE Fixed Gear: $	—	—	—	—	***	***	***	***	0.2⁞	7	0.1⁞	7	0.1⁚	6	0.7⁞	7
LE Fixed Gear: lbs	—	—	—	—	***	***	***	***	0.5⁞	7	0.2⁞	7	0.2⁚	6	1.7⁞	7
Fixed Gear: $	1.1⁞	6	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	2.8⁞	6	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	3.3⁞	4	***	***	0.2⁚	4	0.1⁞	3	4.1⁞	5	4.3⁞	5
Other Vessel: lbs	—	—	—	—	***	***	***	***	0.3⁚	4	0.2⁞	3	9.2⁞	5	9.6⁞	5
Other: $	***	***	65.8⁞	4	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	163.3⁞	4	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	36.8⁞	4	98.0⁞	6	140.4⁞	6	65.9⁞	7	104.0⁚	4	241.7⁞	6
Non-vessel: lbs	—	—	—	—	***	***	215.1⁞	6	251.8⁞	6	119.3⁞	7	207.4⁚	4	454.9⁞	6

Table 4.35: Sablefish: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Sablefish (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	799.3	15	605.9	16	555.7	15	505.3	17	438.2	16	447.0	16	553.0	18	612.9	18
LE Trawl: lbs	383.3	15	276.5	16	186.0	15	212.3	17	208.2	16	168.1	16	208.0	18	217.7	18
LE Fixed Gear: $	—	—	—	—	956.8	12	643.5	11	467.0	12	471.9	12	821.7	13	1,083.5	10
LE Fixed Gear: lbs	—	—	—	—	246.6	12	196.2	11	172.4	12	142.7	12	213.3	13	273.1	10
Fixed Gear: $	1,085.7	10	974.5	12	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	357.6	10	306.3	12	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	1,717.0	5	531.4	9	181.5	9	306.2	8	331.6	10	319.8	8
Other Vessel: lbs	—	—	—	—	269.6	6	128.2	9	56.0	9	77.5	8	87.4	10	78.3	8
Other: $	608.8	4	720.9	5	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	253.9	4	341.1	5	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	250.9	4	347.1	9	455.7	6	598.3	8	235.7	9	687.5	6
Non-vessel: lbs	—	—	—	—	153.8	4	111.6	9	156.8	6	156.5	8	72.5	9	155.9	6

Table 4.36: Thornyheads: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Thornyheads (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	188.9⁞	13	179.3⁞	13	104.3⁞	15	118.1⁞	15	148.7⁞	17	144.7⁞	14	112.2⁞	17	96.8⁞	16
LE Trawl: lbs	369.6⁞	13	331.4⁞	13	175.8⁞	15	198.7⁞	15	228.6⁞	17	216.9⁞	14	176.6⁞	17	145.6⁞	16
LE Fixed Gear: $	—	—	—	—	17.1⁞	8	14.2⁞	10	10.2⁞	8	10.6⁞	9	14.4⁞	10	9.4⁞	10
LE Fixed Gear: lbs	—	—	—	—	16.8⁞	8	8.4⁞	10	4.0⁞	8	6.5⁞	9	***	***	4.2⁞	10
Fixed Gear: $	1.0⁝	6	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	1.3⁝	6	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	1.6⁝	4	6.4⁞	7	2.1⁞	5	0.4⁝	5	1.8⁞	5	1.1⁞	6
Other Vessel: lbs	—	—	—	—	1.8⁝	4	8.0⁞	7	0.7⁝	5	0.3⁞	6	3.0⁞	5	1.5⁞	6
Other: $	***	***		0	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	***	***	74.6⁝	3	72.1⁞	4	45.5⁞	5	37.0⁞	4	46.0⁝	5
Non-vessel: lbs	—	—	—	—	***	***	136.2⁝	3	133.4⁝	4	70.3⁞	5	64.5⁞	4	90.8⁝	5

Table 4.37: English sole: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for English sole (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	14.5⁝	11	8.7⁝	11	7.7⁝	9	6.6⁝	13	10.9⁝	13	12.0⁝	13	15.4⁝	12	20.5⁝	12
LE Trawl: lbs	45.9⁝	11	27.4⁝	11	16.1⁝	9	18.6⁝	13	31.7⁝	13	32.0⁝	13	44.6⁝	12	52.8⁝	12
LE Fixed Gear: $	—	—	—	—		0		0		0		0	***	***	***	***
LE Fixed Gear: lbs	—	—	—	—		0		0		0	***	***	***	***	***	***
Fixed Gear: $	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	***	***	***	***	***	***		0	0.1⁝	4	***	***
Other Vessel: lbs	—	—	—	—	***	***	***	***	***	***		0	0.2⁝	4	***	***
Other: $	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	***	***	2.7⁝	5	18.9⁝	7	14.2⁝	5	***	***	***	***
Non-vessel: lbs	—	—	—	—	***	***	4.8⁝	6	52.7⁝	7	29.4⁝	5	***	***	97.3⁝	3

Table 4.38: Petrale sole: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Petrale sole (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	272.6⁝	11	127.5⁝	13	180.4⁝	11	268.7⁝	12	324.0⁝	16	430.6⁝	13	457.5⁝	14	392.6⁝	15
LE Trawl: lbs	343.6⁝	11	110.7⁝	13	124.6⁝	11	176.1⁝	12	245.5⁝	16	370.4⁝	13	371.6⁝	14	318.3⁝	15
LE Fixed Gear: $	—	—	—	—	***	***	***	***	0.0⁝	5	0.0⁝	5	***	***	3.9⁝	6
LE Fixed Gear: lbs	—	—	—	—	***	***	***	***	0.0⁝	5	0.0⁝	5	***	***	2.3⁝	7
Fixed Gear: $	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	0.1⁝	3	***	***	***	***	0.0⁝	3	1.1⁝	6	***	***
Other Vessel: lbs	—	—	—	—	0.1⁝	3	***	***	***	***	0.1⁝	3	0.9⁝	6	***	***
Other: $	126.7⁝	4	86.2⁚	3	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	99.6⁝	4	49.5⁝	3	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	117.3⁝	5	133.3⁝	5	244.2⁝	6	193.1⁝	7	232.6⁝	6	284.0⁝	5
Non-vessel: lbs	—	—	—	—	65.5⁝	5	84.6⁝	5	177.6⁝	6	150.9⁝	7	161.9⁝	6	190.8⁝	5

Table 4.39: Rex sole: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Rex sole (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	26.2⁝	14	25.5⁝	12	20.9⁝	13	28.0⁝	14	27.8⁝	13	25.7⁝	12	25.8⁝	14	26.7⁝	13
LE Trawl: lbs	76.5⁝	14	77.1⁝	12	56.4⁝	13	58.0⁝	14	70.4⁝	13	64.0⁝	12	66.8⁝	14	70.1⁝	13
LE Fixed Gear: $	—	—	—	—		0		0	***	***		0	***	***	***	***
LE Fixed Gear: lbs	—	—	—	—		0		0	***	***		0	***	***	***	***
Fixed Gear: $	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	0.6⁝	3	***	***	0.0⁝	4		0	1.0⁝	4	1.7⁝	3
Other Vessel: lbs	—	—	—	—	1.7⁝	3	***	***	0.1⁝	4		0	2.5⁝	4	4.1⁝	3
Other: $	21.3⁝	3	22.4⁝	3	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	23.5⁝	3	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	15.2⁝	4	13.3⁝	4	13.7⁝	7	15.1⁝	5	18.3⁝	3	45.8⁝	3
Non-vessel: lbs	—	—	—	—	8.6⁝	4	30.7⁝	4	31.3⁝	7	36.0⁝	5	44.3⁝	3	144.3⁝	3

Table 4.40: Arrowtooth flounder: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Arrowtooth flounder (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	—	—	—	—	38.2⁝	11	40.4⁝	13	41.7⁝	11	26.7⁝	11	26.0⁝	11	25.4⁝	9
LE Trawl: lbs	—	—	—	—	373.7⁝	11	323.4⁝	13	382.8⁝	11	239.0⁝	11	253.5⁝	11	224.5⁝	10
LE Fixed Gear: $	—	—	—	—	***	***	0.1⁝	5	0.1⁝	5	0.0⁝	5	0.1⁝	4	0.1⁝	4
LE Fixed Gear: lbs	—	—	—	—	***	***	0.5⁝	5	0.8⁝	5	0.3⁝	5	0.1⁝	4	1.0⁝	5
Other Vessel: $	—	—	—	—	0.3⁝	3	***	***	0.1⁝	5	***	***	0.1⁝	4	0.6⁝	3
Other Vessel: lbs	—	—	—	—	3.2⁝	3	***	***	1.5⁝	6	0.9⁝	3	1.3⁝	4	5.6⁝	3
Non-vessel: $	—	—	—	—	***	***	52.0⁝	4	23.5⁝	5	5.6⁝	3	4.5⁝	3	3.8⁝	3
Non-vessel: lbs	—	—	—	—	***	***	***	***	76.0⁝	5	44.4⁝	3	44.1⁝	3	25.0⁝	3

Table 4.41: Lingcod: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Lingcod (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	10.2⁞	15	6.6⁞	14	21.0⁞	17	26.8⁞	17	26.6⁞	17	22.6⁞	17	23.9⁞	16	35.1⁞	16
LE Trawl: lbs	15.7⁞	15	9.7⁞	14	26.9⁞	17	35.9⁞	17	35.5⁞	17	28.6⁞	17	23.5⁞	16	34.2⁞	16
LE Fixed Gear: $	—	—	—	—	0.5⁚	6	1.0⁚	6	1.4⁞	10	1.7⁞	8	6.2⁞	10	3.0⁞	10
LE Fixed Gear: lbs	—	—	—	—	0.6⁚	6	1.2⁚	6	0.9⁚	10	0.9⁚	8	4.1⁞	10	2.1⁚	10
Fixed Gear: $	1.4⁞	7	1.4⁞	6	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	1.7⁞	7	1.7⁚	6	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	3.4⁚	4	9.7⁞	7	2.5⁞	8	8.4⁞	7	8.8⁞	8	7.6⁞	7
Other Vessel: lbs	—	—	—	—	3.2⁚	4	11.4⁞	7	1.7⁞	8	3.0⁞	7	4.6⁞	8	4.5⁚	7
Other: $	35.3⁚	3	19.8⁚	5	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	27.9⁞	3	16.9⁞	5	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	21.8⁞	7	35.3⁞	6	45.3⁚	7	20.3⁞	7	23.6⁞	7	22.5⁞	7
Non-vessel: lbs	—	—	—	—	22.0⁞	7	38.3⁞	6	46.0⁚	7	12.9⁞	7	11.3⁞	7	15.2⁞	7

Table 4.42: Rockfish: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Rockfish (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	79.2⁝	18	58.9⁝	15	84.1⁝	18	118.8⁝	17	112.8⁝	19	137.5⁝	18	176.4⁝	17	139.1⁝	18
LE Trawl: lbs	114.6⁝	18	114.0⁝	15	156.3⁝	18	212.6⁝	17	203.9⁝	19	257.8⁝	18	358.9⁝	17	300.4⁝	18
LE Fixed Gear: $	—	—	—	—	8.5⁝	8	11.4⁝	10	9.5⁝	9	8.5⁝	10	17.2⁝	12	15.2⁝	11
LE Fixed Gear: lbs	—	—	—	—	8.6⁝	8	10.6⁝	10	9.1⁝	9	5.5⁝	10	12.3⁝	12	11.0⁝	11
Fixed Gear: $	11.6⁝	6	19.6⁝	9	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	17.6⁝	6	23.6⁝	9	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	19.0⁝	5	102.0⁝	8	48.7⁝	7	45.7⁝	8	72.0⁝	8	34.9⁝	8
Other Vessel: lbs	—	—	—	—	17.9⁝	5	***	***	23.1⁝	7	12.9⁝	8	15.4⁝	8	11.0⁝	8
Other: $	256.7⁝	5	265.9⁝	5	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	367.4⁝	5	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	233.9⁝	7	183.6⁝	6	162.4⁝	7	114.7⁝	9	124.3⁝	9	129.4⁝	8
Non-vessel: lbs	—	—	—	—	258.9⁝	7	158.8⁝	6	225.4⁝	7	164.7⁝	9	179.3⁝	9	244.4⁝	8

Table 4.43: Sanddab: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Sanddab (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	—	—	—	—	23.5⁝	7	17.0⁝	8	19.6⁝	9	23.0⁝	10	16.4⁝	9	7.9⁝	10
LE Trawl: lbs	—	—	—	—	40.6⁝	7	28.7⁝	8	33.9⁝	9	40.4⁝	10	28.6⁝	9	13.7⁝	10
LE Fixed Gear: $	—	—	—	—		0		0		0		0	***	***	***	***
LE Fixed Gear: lbs	—	—	—	—		0		0		0		0	***	***	***	***
Other Vessel: $	—	—	—	—	***	***	***	***		0	***	***		0	***	***
Other Vessel: lbs	—	—	—	—	***	***	***	***		0	***	***		0	***	***
Non-vessel: $	—	—	—	—	1.9⁝	4	1.2⁝	5	3.2⁝	7	6.6⁝	5	5.7⁝	4	***	***
Non-vessel: lbs	—	—	—	—	0.7·	4	1.5⁝	5	3.0⁝	7	6.7⁝	5	3.0·	4	***	***

Table 4.44: Sharks, skates and rays: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Sharks, skates and rays (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
LE Trawl: $	41.2⁝	12	66.5⁝	11	66.8⁝	12	72.6⁝	13	64.3⁝	13	83.7⁝	12	78.1⁝	12	90.8⁝	11
LE Trawl: lbs	210.6⁝	12	257.6⁝	11	215.7⁝	12	175.8⁝	13	160.4⁝	13	199.1⁝	12	174.1⁝	12	232.1⁝	11
LE Fixed Gear: $	—	—	—	—	8.0⁝	4	3.0⁚	7	2.6⁚	8	1.7⁝	6	2.1⁝	8	1.7⁝	10
LE Fixed Gear: lbs	—	—	—	—	5.3⁚	4	7.5⁚	7	6.4⁚	8	5.3⁝	6	6.3⁝	8	4.6⁝	10
Fixed Gear: $	1.5⁝	6	5.2⁚	3	—	—	—	—	—	—	—	—	—	—	—	—
Fixed Gear: lbs	6.9⁝	6	19.0⁚	3	—	—	—	—	—	—	—	—	—	—	—	—
Other Vessel: $	—	—	—	—	9.1⁝	6	10.1⁝	6	2.5⁝	6	3.9⁝	6	7.2⁝	7	6.2⁝	5
Other Vessel: lbs	—	—	—	—	14.6⁝	6	30.7⁝	6	11.7⁝	6	8.7⁝	6	8.0⁝	7	9.1⁚	5
Other: $	47.8⁚	3	26.8⁝	3	—	—	—	—	—	—	—	—	—	—	—	—
Other: lbs	***	***	31.5⁝	3	—	—	—	—	—	—	—	—	—	—	—	—
Non-vessel: $	—	—	—	—	6.2⁝	4	15.6⁝	6	27.6⁚	6	44.1⁝	8	20.5⁝	5	19.1⁚	5
Non-vessel: lbs	—	—	—	—	4.7⁚	4	34.1⁝	6	48.3⁚	6	61.8⁝	8	37.7⁝	5	33.4⁚	5

Table 4.45: Crab: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Crab (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
All: $	1,916.7	15	3,211.1	18	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	1,049.3	15	1,730.3	18	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	3,307.0	19	3,405.2	18	3,983.8	19	3,474.8	20	2,184.5	17	4,061.7	20
Vessel: lbs	—	—	—	—	1,372.8	19	1,148.4	18	1,531.4	19	1,049.5	20	580.2	17	1,267.7	20
Non-vessel: $	—	—	—	—	919.8	8	1,868.5	11	1,770.6	9	1,324.1	9	1,697.9	10	2,336.5	11
Non-vessel: lbs	—	—	—	—	362.2	8	640.2	11	579.8	9	351.8	9	295.3	10	534.4	11

Table 4.46: Shrimp: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Shrimp (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
All: $	1,134.5	9	1,226.5	11	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	2,909.7	9	3,224.7	11	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	2,854.9	9	2,421.5	11	2,547.9	11	3,104.5	11	3,202.4	14	1,849.1	14
Vessel: lbs	—	—	—	—	5,868.3	9	4,721.4	11	4,897.7	11	5,391.6	11	4,157.7	14	2,602.4	14
Non-vessel: $	—	—	—	—	557.2	7	471.0	7	514.0	7	1,533.4	8	2,197.8	10	772.9	10
Non-vessel: lbs	—	—	—	—	518.0	7	598.7	7	580.4	7	2,265.2	8	2,878.9	10	1,062.7	10

Table 4.47: Coastal pelagics: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Coastal pelagics (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
All: $	597.4⁝	9	659.9⁝	8	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	5,295.3⁝	9	5,766.5⁝	8	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	418.7⁝	11	1,665.9⁝	9	995.5⁝	8	712.4⁝	7	60.0⁝	7	165.9⁝	5
Vessel: lbs	—	—	—	—	3,578.9⁝	11	15,988.8⁝	9	9,050.7⁝	8	4,064.5⁝	7	426.4⁝	7	1,675.2⁝	6
Non-vessel: $	—	—	—	—	65.5⁝	7	69.4⁝	5	176.6⁝	5	***	***	***	***	48.0⁝	6
Non-vessel: lbs	—	—	—	—	44.6⁝	7	447.2⁝	5	472.7⁝	6	22.1⁝	5	***	***	143.4⁝	6

Table 4.48: Salmon: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Salmon (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
All: $	584.5⁝	10	1,142.8⁝	13	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	526.8⁝	9	485.1⁝	13	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	684.3⁝	18	657.6⁝	15	1,264.6⁝	17	1,343.4⁝	18	665.1⁝	17	452.3⁝	16
Vessel: lbs	—	—	—	—	467.3⁝	18	224.4⁝	15	636.8⁝	17	438.4⁝	18	256.4⁝	17	154.5⁝	16
Non-vessel: $	—	—	—	—	876.4⁝	9	468.7⁝	9	1,184.2⁝	8	1,174.7⁝	8	998.6⁝	8	952.6⁝	5
Non-vessel: lbs	—	—	—	—	257.0⁝	9	190.9⁝	9	498.6⁝	8	434.4⁝	8	385.8⁝	8	426.7⁝	5

Table 4.49: Tuna: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Tuna (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
All: $	679.8⁞	10	793.3⁞	14	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	646.5⁞	10	640.1⁞	14	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	712.5⁞	17	1,090.2⁞	16	876.4⁞	16	789.1⁞	13	647.4⁞	12	918.3⁞	11
Vessel: lbs	—	—	—	—	359.1⁞	17	707.6⁞	16	544.7⁞	16	635.0⁞	13	554.6⁞	12	503.8⁞	11
Non-vessel: $	—	—	—	—	307.0⁚	5	***	***	148.7⁞	5	302.9⁞	6	211.8⁞	6	335.7⁞	7
Non-vessel: lbs	—	—	—	—	127.1⁞	5	***	***	43.5⁚	6	153.2⁞	6	108.0⁞	6	155.6⁞	7

Table 4.50: California halibut: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for California halibut (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
All: $	113.7⁚	5	85.3⁞	8	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	23.6⁞	5	18.3⁚	8	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	81.7⁞	7	54.4⁞	6	66.4⁞	8	67.6⁞	8	92.0⁞	6	99.0⁞	7
Vessel: lbs	—	—	—	—	17.8⁞	7	11.2⁞	6	13.7⁞	8	13.0⁞	8	18.1⁞	6	18.1⁞	7
Non-vessel: $	—	—	—	—	109.4⁚	5	21.7⁞	3	***	***	41.5⁚	3	52.2⁚	4	***	***
Non-vessel: lbs	—	—	—	—	19.7⁚	5	4.8⁞	3	***	***	7.9⁚	3	11.3⁚	4	***	***

Table 4.51: Pacific halibut: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Pacific halibut (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
All: $	402.3⁝	6	236.7⁝	8	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	86.0⁚	6	34.0⁝	8	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	151.4⁝	8	425.5⁝	8	335.3⁝	8	515.2⁝	7	457.1⁝	8	630.5⁝	7
Vessel: lbs	—	—	—	—	24.2⁝	8	68.1⁝	8	56.1⁝	8	71.1⁝	7	63.7⁝	8	85.8⁝	7
Non-vessel: $	—	—	—	—	222.4⁝	5	146.9⁝	5	233.4⁝	4	129.1⁝	5	203.8⁝	6	263.5⁚	4
Non-vessel: lbs	—	—	—	—	23.7⁚	5	24.0⁝	5	35.2⁝	4	27.2⁚	5	28.3⁝	6	35.0⁚	4

Table 4.52: Other: Average purchases by source for EDC Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Other (N = number of EDC Processors with non-zero, non-NA responses).

Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
All: $	534.6⁝	16	565.3⁝	18	—	—	—	—	—	—	—	—	—	—	—	—
All: lbs	748.1⁝	16	1,023.3⁝	18	—	—	—	—	—	—	—	—	—	—	—	—
Vessel: $	—	—	—	—	178.4⁝	17	582.1⁝	10	734.0	15	231.3⁝	12	203.4⁝	10	465.8⁝	17
Vessel: lbs	—	—	—	—	275.2⁝	17	1,546.2⁝	10	1,943.8⁝	14	368.1⁝	12	309.4⁝	10	827.4⁝	18
Non-vessel: $	—	—	—	—	907.2⁝	10	595.9⁝	15	968.7⁝	9	855.2⁝	13	940.8⁝	11	1,188.0⁝	10
Non-vessel: lbs	—	—	—	—	491.6⁚	10	465.7⁚	15	436.4⁚	9	541.9⁚	13	391.5⁚	11	479.3⁚	10

5 Depreciation

Depreciation includes depreciation for all capital investments on buildings and new and used machinery and equipment taken during the survey year (Table 5.1). Depreciation is excluded from the calculations of both fixed and variable costs (Section 4) and net revenue (Section 12).

Table 5.1: Depreciation for EDC Processors. Average facility depreciation taken during the survey year (millions of $) (N = number of EDC Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Depreciation	$0.39	17	$0.31	19	$0.24	22	$0.37	21	$0.53	19	$0.49	21	$0.35	20	$0.39	22

6 Revenue

Participants are asked to provide revenue from production of purchased fish as well as custom processing, and the sale or lease of quota. Beginning with the 2011 form, revenue from offloading fees is also collected, and beginning in 2013, revenue from insurance settlements is also collected. Not enough processors reported quota revenue to be able to display this information.

6.1 Revenue from custom processing, offloading, insurance settlements, and sale or lease of quota

Table 6.1: Other revenue for EDC Processors. Other sources of revenue, including custom processing and offloading (thousands of $) (N = number of EDC Processors with non-zero, non-NA responses).

Revenue Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Custom processing of whiting	***	***	***	***	***	***	$118.7⁝	4	$124.2⁝	4	***	***	***	***		0
Custom processing of non-whiting groundfish	***	***	***	***	$166.0⁝	4	$212.9⁝	5	$273.8⁝	5	***	***	***	***	***	***
Custom processing of other species	$63.2⁝	6	$76.2⁝	6	$121.1⁝	4	$250.2⁝	5	—	—	—	—	—	—	—	—
Offloading	—	—	—	—	$128.4⁝	9	$69.0⁝	12	$84.4⁝	13	$92.5⁝	12	$60.2⁝	13	$70.7⁝	13
Insurance settlements	—	—	—	—	—	—	—	—	***	***	***	***		0		0
Other	—	—	—	—	—	—	—	—	—	—	***	***	***	***	***	***

6.2 Production activities

The weight and value from production activities free-on-board (FOB) plant are requested for each survey year. Free-on-board plant indicates that the buyer both takes responsibility and liability for the product and pays shipping costs. These production values exclude freight charges, revenue from products made in previous years, products made from custom processing performed for another company, and any additional payments received that covered shipping, handling, or storage costs associated with sale beyond the plant. The total value of fish production does include products made in that survey year and held in inventory at the end of the year, products shipped to other facilities in the same company, products made from custom processing performed by another facility, and any post-season adjustments.

The species categories are the same as the fish purchase section but are instead divided into product categories that include processed fresh, frozen, unprocessed, and other, as well as additional categories for whiting. There is also a category for non-species specific products such as fishmeal, fish oil, and bait.

6.3 Total value and weight of fish production by species

Table 6.2: Total production by EDC Processors of Pacific whiting, Dover sole, Sablefish, Thornyheads, English sole and Petrale sole. Total production weight (thousands of lbs) and revenue (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Pacific whiting: $	46,650.4	12	33,063.4	13	70,410.9	10	53,940.4	11	74,309.1	10	71,426.9	12	36,122.8	10	46,648.2	10
Pacific whiting: lbs	77,578.0	12	48,800.5	13	136,723.1	10	76,113.8	11	143,283.2	10	134,523.2	12	88,741.5	10	103,317.2	10
Dover sole: $	17,628.4	15	16,152.8	16	13,697.1	17	15,750.3	18	16,233.1	15	13,293.2	15	12,657.3	16	14,002.4	17
Dover sole: lbs	8,538.5	15	7,469.9	16	4,324.5	17	6,054.9	20	6,192.6	16	4,171.6	15	4,448.9	16	6,682.5	18
Sablefish: $	34,343.5	18	39,059.7	20	38,701.6	26	31,549.7	26	23,257.6	23	26,085.0	22	35,844.5	23	39,917.1	24
Sablefish: lbs	7,584.2	18	7,740.0	20	6,721.3	26	6,068.0	27	5,417.6	24	5,209.7	22	6,520.5	23	6,617.0	24
Thornyheads: $	4,553.4	14	5,066.7	15	4,439.3	20	5,679.4	19	6,052.0	16	5,063.8	16	4,656.8	18	3,734.0	19
Thornyheads: lbs	2,076.2	14	2,578.4	15	1,471.8	20	1,797.1	20	2,412.2	17	1,982.4	17	1,708.3	18	1,937.9	19
English sole: $	575.7	13	289.6	15	271.5	14	389.3	16	634.3	16	406.8	13	576.9	13	566.6	15
English sole: lbs	334.7	13	159.5	15	104.8	14	176.2	17	386.9	16	207.7	14	304.5	13	357.0	15
Petrale sole: $	7,184.3	14	2,807.7	18	3,804.6	18	6,004.9	18	9,633.0	19	11,236.2	17	11,784.6	21	11,270.8	19
Petrale sole: lbs	2,658.6	14	913.0	18	958.9	18	1,487.8	18	2,806.2	20	3,451.7	17	3,556.8	21	3,417.0	20

Table 6.3: Total production by EDC Processors of Rex sole, Arrowtooth flounder, Lingcod, Rockfish, Sanddab and Sharks, skates and rays. Total production weight (thousands of lbs) and revenue (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Rex sole: $	1,058.6	14	863.0	14	756.6	14	1,046.2	16	1,035.2	15	895.4	12	934.9	14	1,045.5	14
Rex sole: lbs	712.2	14	587.6	14	401.8	14	536.7	17	649.7	16	562.3	12	720.7	14	837.9	14
Arrowtooth flounder: $	—	—	—	—	1,659.9	11	1,986.9	13	1,594.6	15	1,077.7	13	1,155.8	13	684.9	13
Arrowtooth flounder: lbs	—	—	—	—	1,891.5	11	2,262.9	14	2,065.6	16	1,207.5	13	1,341.8	13	1,029.7	13
Lingcod: $	556.7	18	454.8	20	1,153.0	21	1,666.4	21	1,664.4	22	1,232.5	22	1,191.3	22	1,419.7	22
Lingcod: lbs	217.6	18	162.2	20	323.2	21	468.2	22	458.0	23	323.9	22	298.7	22	410.4	22
Rockfish: $	4,438.4	21	3,595.1	21	5,321.3	29	6,261.9	25	6,003.0	24	6,256.7	23	8,503.2	24	6,592.4	23
Rockfish: lbs	2,036.5	21	1,759.0	21	2,506.2	29	2,771.9	25	2,665.4	24	3,093.8	23	3,942.5	24	3,500.8	23
Sanddab: $	—	—	—	—	455.2	13	467.0	15	638.7	13	701.5	13	480.0	13	314.7	12
Sanddab: lbs	—	—	—	—	234.8	13	210.7	15	294.7	14	305.1	13	203.8	13	138.4	12
Sharks, skates and rays: $	1,804.3	15	1,972.9	15	2,795.5	19	2,643.0	18	1,972.3	16	2,422.1	18	2,548.3	17	2,411.3	19
Sharks, skates and rays: lbs	1,470.8	15	1,308.6	15	1,676.0	19	1,326.8	19	1,050.1	18	1,254.0	18	1,034.1	17	1,489.1	20

Table 6.4: Total production by EDC Processors of Crab, Shrimp, Coastal pelagics, Salmon, Tuna, California halibut, Pacific halibut and Other. Total production weight (thousands of lbs) and revenue (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Crab: $	77,290.8	16	106,290.1	20	105,110.9	23	121,959.7	25	134,654.8	26	111,658.5	24	78,704.8	22	160,602.3	25
Crab: lbs	14,866.4	16	24,436.5	20	19,085.2	23	20,002.6	25	23,158.7	26	16,904.3	24	9,291.7	22	24,997.7	25
Shrimp: $	28,982.7	10	29,508.1	12	59,079.0	13	61,760.0	15	65,017.5	13	92,488.9	15	125,019.7	18	63,860.0	15
Shrimp: lbs	12,163.4	10	15,854.7	12	20,044.9	13	21,181.2	15	22,495.4	13	39,552.1	15	60,121.5	18	20,627.8	15
Coastal pelagics: $	12,896.7	9	11,441.9	8	13,015.1	15	39,843.3	11	18,449.5	10	16,118.8	9	933.4	9	3,453.6	9
Coastal pelagics: lbs	42,482.5	9	39,981.2	8	39,417.4	15	128,587.3	11	69,885.2	10	26,165.8	9	2,935.5	9	10,789.2	9
Salmon: $	12,952.5	9	20,585.3	14	27,907.2	20	21,045.3	19	44,200.5	20	46,318.0	20	25,899.0	20	17,594.1	20
Salmon: lbs	4,504.1	9	5,335.8	14	8,568.4	20	4,246.1	20	11,597.8	21	9,437.1	20	6,133.7	20	3,330.9	20
Tuna: $	14,690.9	12	14,805.5	16	19,850.0	22	23,870.1	19	20,255.0	18	13,285.7	15	12,928.5	16	16,484.7	15
Tuna: lbs	10,332.3	12	8,591.4	16	7,592.4	22	13,053.4	19	9,968.4	18	8,678.5	15	7,501.4	16	6,573.4	15
California halibut: $	721.6	5	1,262.9	8	1,591.0	11	701.1	9	978.4	10	1,151.1	9	1,128.4	7	1,490.2	6
California halibut: lbs	118.6	5	178.3	8	237.9	11	121.4	9	159.1	10	148.8	9	182.4	7	228.2	6
Pacific halibut: $	3,598.6	7	2,043.8	9	2,585.0	11	4,118.1	8	3,871.4	9	4,756.5	9	5,372.3	11	6,181.9	10
Pacific halibut: lbs	639.7	7	247.8	9	289.6	11	625.6	9	570.1	10	609.0	9	649.2	11	743.3	10
Other: $	18,070.6	17	23,028.0	18	29,884.9	25	33,077.8	22	41,541.0	21	26,724.7	18	32,383.5	21	46,504.8	24
Other: lbs	34,080.6	17	47,133.6	18	33,627.6	25	49,789.0	24	112,499.3	22	25,052.0	18	21,401.9	21	41,373.5	24

6.4 Average value and weight of fish production by species

Table 6.5: Average production by EDC Processors of Pacific whiting, Dover sole, Sablefish, Thornyheads, English sole and Petrale sole. Average production weight (thousands of lbs) and revenue (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Pacific whiting: $	3,887.5	12	2,543.3	13	7,041.1	10	4,903.7	11	7,430.9	10	5,952.2	12	3,612.3	10	4,664.8	10
Pacific whiting: lbs	6,464.8	12	3,753.9	13	13,672.3	10	6,919.4	11	14,328.3	10	11,210.3	12	8,874.2	10	10,331.7	10
Dover sole: $	1,175.2	15	1,009.6	16	805.7	17	875.0	18	1,082.2	15	886.2	15	791.1	16	823.7	17
Dover sole: lbs	569.2	15	466.9	16	254.4	17	302.7	20	387.0	16	278.1	15	278.1	16	371.3	18
Sablefish: $	1,908.0	18	1,953.0	20	1,488.5	26	1,213.5	26	1,011.2	23	1,185.7	22	1,558.5	23	1,663.2	24
Sablefish: lbs	421.3	18	387.0	20	258.5	26	224.7	27	225.7	24	236.8	22	283.5	23	275.7	24
Thornyheads: $	325.2	14	337.8	15	222.0	20	298.9	19	378.3	16	316.5	16	258.7	18	196.5	19
Thornyheads: lbs	148.3	14	171.9	15	73.6	20	89.9	20	141.9	17	116.6	17	94.9	18	102.0	19
English sole: $	44.3	13	19.3	15	19.4	14	24.3	16	39.6	16	31.3	13	44.4	13	37.8	15
English sole: lbs	25.7	13	10.6	15	7.5	14	10.4	17	24.2	16	14.8	14	23.4	13	23.8	15
Petrale sole: $	513.2	14	156.0	18	211.4	18	333.6	18	507.0	19	661.0	17	561.2	21	593.2	19
Petrale sole: lbs	189.9	14	50.7	18	53.3	18	82.7	18	140.3	20	203.0	17	169.4	21	170.8	20

Table 6.6: Average production by EDC Processors of Rex sole, Arrowtooth flounder, Lingcod, Rockfish, Sanddab and Sharks, skates and rays. Average production weight (thousands of lbs) and revenue (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Rex sole: $	75.6⁝	14	61.6⁝	14	54.0⁝	14	65.4⁝	16	69.0⁝	15	74.6⁝	12	66.8⁝	14	74.7⁝	14
Rex sole: lbs	50.9⁝	14	42.0⁝	14	28.7⁝	14	31.6⁝	17	40.6⁝	16	46.9⁝	12	51.5⁝	14	59.8⁝	14
Arrowtooth flounder: $	—	—	—	—	150.9⁝	11	152.8⁝	13	106.3⁝	15	82.9⁝	13	88.9⁝	13	52.7⁝	13
Arrowtooth flounder: lbs	—	—	—	—	172.0⁝	11	161.6⁝	14	129.1⁝	16	92.9⁝	13	103.2⁝	13	79.2⁝	13
Lingcod: $	30.9⁝	18	22.7⁝	20	54.9⁝	21	79.4⁝	21	75.7⁝	22	56.0⁝	22	54.2⁝	22	64.5⁝	22
Lingcod: lbs	12.1⁝	18	8.1⁝	20	15.4⁝	21	21.3⁝	22	19.9⁝	23	14.7⁝	22	13.6⁝	22	18.7⁝	22
Rockfish: $	211.4⁝	21	171.2⁝	21	183.5⁝	29	250.5⁝	25	250.1⁝	24	272.0⁝	23	354.3⁝	24	286.6⁝	23
Rockfish: lbs	97.0⁝	21	83.8⁝	21	86.4⁝	29	110.9⁝	25	111.1⁝	24	134.5⁝	23	164.3⁝	24	152.2⁝	23
Sanddab: $	—	—	—	—	35.0⁝	13	31.1⁝	15	49.1⁝	13	54.0⁝	13	36.9⁝	13	26.2⁝	12
Sanddab: lbs	—	—	—	—	18.1⁝	13	14.0⁝	15	21.0⁝	14	23.5⁝	13	15.7⁝	13	11.5⁝	12
Sharks, skates and rays: $	120.3⁝	15	131.5⁝	15	147.1⁝	19	146.8⁝	18	123.3⁝	16	134.6⁝	18	149.9⁝	17	126.9⁝	19
Sharks, skates and rays: lbs	98.1⁝	15	87.2⁝	15	88.2⁝	19	69.8⁝	19	58.3⁝	18	69.7⁝	18	60.8⁝	17	74.5⁝	20

Table 6.7: Average production by EDC Processors of Crab, Shrimp, Coastal pelagics, Salmon, Tuna, California halibut, Pacific halibut and Other. Average production weight (thousands of lbs) and revenue (thousands of $) by species for (N = number of EDC Processors).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Crab: $	4,830.7	16	5,314.5	20	4,570.0	23	4,878.4	25	5,179.0	26	4,652.4	24	3,577.5	22	6,424.1	25
Crab: lbs	929.1	16	1,221.8	20	829.8	23	800.1	25	890.7	26	704.3	24	422.4	22	999.9	25
Shrimp: $	2,898.3	10	2,459.0	12	4,544.5	13	4,117.3	15	5,001.3	13	6,165.9	15	6,945.5	18	4,257.3	15
Shrimp: lbs	1,216.3	10	1,321.2	12	1,541.9	13	1,412.1	15	1,730.4	13	2,636.8	15	3,340.1	18	1,375.2	15
Coastal pelagics: $	1,433.0	9	1,430.2	8	867.7	15	3,622.1	11	1,845.0	10	1,791.0	9	103.7	9	383.7	9
Coastal pelagics: lbs	4,720.3	9	4,997.7	8	2,627.8	15	11,689.8	11	6,988.5	10	2,907.3	9	326.2	9	1,198.8	9
Salmon: $	1,439.2	9	1,470.4	14	1,395.4	20	1,107.6	19	2,210.0	20	2,315.9	20	1,294.9	20	879.7	20
Salmon: lbs	500.5	9	381.1	14	428.4	20	212.3	20	552.3	21	471.9	20	306.7	20	166.5	20
Tuna: $	1,224.2	12	925.3	16	902.3	22	1,256.3	19	1,125.3	18	885.7	15	808.0	16	1,099.0	15
Tuna: lbs	861.0	12	537.0	16	345.1	22	687.0	19	553.8	18	578.6	15	468.8	16	438.2	15
California halibut: $	144.3	5	157.9	8	144.6	11	77.9	9	97.8	10	127.9	9	161.2	7	248.4	6
California halibut: lbs	23.7	5	22.3	8	21.6	11	13.5	9	15.9	10	16.5	9	26.1	7	38.0	6
Pacific halibut: $	514.1	7	227.1	9	235.0	11	514.8	8	430.2	9	528.5	9	488.4	11	618.2	10
Pacific halibut: lbs	91.4	7	27.5	9	26.3	11	69.5	9	57.0	10	67.7	9	59.0	11	74.3	10
Other: $	1,063.0	17	1,279.3	18	1,195.4	25	1,503.5	22	1,978.1	21	1,484.7	18	1,542.1	21	1,937.7	24
Other: lbs	2,004.7	17	2,618.5	18	1,345.1	25	2,074.5	24	5,113.6	22	1,391.8	18	1,019.1	21	1,723.9	24

6.5 Total value and weight of fish production by product type and species

Table 6.8: Pacific whiting: Total production by product type for EDC Processors. Pacific whiting: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fillet: $	5,913.8	3	9,633.7	4	12,203.0	3	6,866.2	3	***	***	***	***	***	***	7,225.9	3
Fillet: lbs	5,401.9	3	8,203.6	4	18,735.6	3	6,874.5	3	***	***	16,164.3	3	4,336.5	3	7,566.9	3
Frozen: $	***	***	1,252.3	4	9,063.6	6	4,123.5	6	6,498.2	9	2,555.8	6	4,489.4	6	1,906.7	6
Frozen: lbs	***	***	3,753.1	4	31,185.4	6	7,823.7	6	25,817.0	9	8,551.9	6	15,700.5	6	8,688.6	6
Headed-and-gutted: $	35,988.4	10	19,261.8	10	41,419.5	9	29,167.6	8	41,107.4	8	34,923.4	8	17,219.8	7	23,859.4	7
Headed-and-gutted: lbs	64,395.8	10	34,243.6	10	73,910.2	9	45,146.1	8	82,575.6	8	68,747.3	8	46,554.4	7	55,851.5	7
Roe: $	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Roe: lbs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Surimi: $	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Surimi: lbs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unprocessed: $	***	***	34.9	3	***	***	***	***	***	***	***	***	***	***	417.7	4
Unprocessed: lbs	***	***	332.0	3	***	***	4,786.9	3	***	***	***	***	***	***	7,420.4	4
Other: $	***	***	***	***	***	***	***	***	***	***	***	***	121.2	3	1,121.5	4
Other: lbs	***	***	***	***	***	***	***	***	***	***	21,178.1	4	10,347.1	3	11,123.7	4

Table 6.9: Dover sole: Total production by product type for EDC Processors. Dover sole: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	14,309.6	12	13,782.6	11	12,014.6	10	12,687.5	12	13,014.8	10	11,216.0	11	9,980.7	9	10,053.9	10
Fresh: lbs	6,385.1	12	5,471.9	11	3,607.0	10	3,631.1	12	3,678.2	10	3,107.8	11	2,866.8	9	3,058.2	10
Frozen: $	2,724.2	10	1,990.1	11	1,611.9	11	2,499.4	10	2,595.3	10	1,754.8	9	2,320.9	9	2,922.6	9
Frozen: lbs	1,269.9	10	1,266.7	11	605.9	11	996.6	10	1,291.1	10	498.0	9	849.0	9	1,318.9	9
Unprocessed: $	27.2	5	107.8	7	67.6	8	132.4	8	492.2	6	322.4	6	355.3	9	342.4	7
Unprocessed: lbs	52.0	5	156.4	7	91.7	8	775.4	10	1,028.0	7	565.7	6	732.3	9	781.0	8
Other: $	***	***	***	***	0.0	0	***	***	***	***	0.0	0	0.0	0	***	***
Other: lbs	***	***	***	***	0.0	0	***	***	***	***	0.0	0	0.0	0	***	***

Table 6.10: Sablefish: Total production by product type for EDC Processors. Sablefish: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	5,017.6	11	6,515.8	13	6,107.3	12	3,425.5	13	3,266.6	13	4,032.9	13	3,850.9	13	4,060.6	10
Fresh: lbs	1,233.2	11	1,236.1	13	1,835.2	12	672.2	13	859.1	13	633.2	13	555.6	13	580.0	10
Frozen: $	27,114.5	11	30,130.7	13	30,305.7	12	26,192.4	13	17,980.7	14	18,464.3	12	28,090.7	10	32,232.3	11
Frozen: lbs	5,527.7	11	5,599.4	13	4,231.0	12	4,713.8	13	3,721.0	14	3,324.6	12	4,818.6	10	4,824.5	11
Unprocessed: $	1,573.6	3	2,032.6	5	1,527.0	9	1,408.0	7	1,876.8	11	2,931.7	11	2,734.1	11	2,871.9	13
Unprocessed: lbs	560.5	3	706.4	5	378.4	9	533.6	8	781.2	12	1,030.9	11	883.2	11	926.8	13
Other: $	***	***	***	***	0.0	0	364.4	4	***	***	***	***	***	***	***	***
Other: lbs	***	***	***	***	0.0	0	67.5	4	***	***	***	***	***	***	***	***

Table 6.11: Thornyheads: Total production by product type for EDC Processors. Thornyheads: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	232.6	5	348.5	6	10.1	3	***	***	***	***	623.5	7	148.1	4	742.8	5
Fresh: lbs	193.7	5	297.1	6	5.4	3	***	***	***	***	212.0	8	67.2	4	252.3	5
Frozen: $	4,215.8	7	4,506.4	7	3,862.6	8	5,055.3	9	5,017.8	10	3,031.3	9	3,435.2	9	1,469.9	10
Frozen: lbs	1,797.3	7	2,034.3	7	1,131.4	8	1,387.6	9	1,658.6	10	965.7	9	1,102.8	9	522.9	10
Unprocessed: $	104.4	3	176.6	5	468.7	10	596.8	9	1,010.9	9	1,409.0	7	1,073.2	11	1,283.9	12
Unprocessed: lbs	84.9	3	181.2	5	313.2	10	377.2	10	743.5	10	804.6	7	538.1	11	821.3	12
Other: $	0.0	0	***	***	***	***	***	***	0.0	0	0.0	0	0.0	0	***	***
Other: lbs	0.0	0	***	***	***	***	***	***	0.0	0	0.0	0	0.0	0	***	***

Table 6.12: English sole: Total production by product type for EDC Processors. English sole: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	448.7	11	230.3	10	222.0	8	308.4	9	286.6	9	285.3	8	438.9	8	433.8	8
Fresh: lbs	210.6	11	98.7	10	69.5	8	91.1	9	89.3	9	86.4	8	141.9	8	163.8	8
Frozen: $	98.1	6	47.1	4	38.2	5	67.4	8	211.3	9	89.2	9	113.4	8	104.0	7
Frozen: lbs	80.9	6	43.4	4	15.6	5	61.1	8	138.8	9	63.8	9	120.6	8	124.5	7
Unprocessed: $	14.5	3	9.4	6	5.5	5	7.3	6	124.7	8	21.6	6	18.9	6	15.0	7
Unprocessed: lbs	21.7	3	14.8	6	5.9	5	9.4	7	138.0	8	36.1	7	31.7	6	34.1	7
Other: $	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Other: lbs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0

Table 6.13: Petrale sole: Total production by product type for EDC Processors. Petrale sole: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	4,996.2	11	1,759.4	13	2,377.9	10	3,874.1	10	5,688.2	11	7,084.2	11	7,651.9	13	8,049.5	9
Fresh: lbs	1,446.8	11	431.5	13	432.3	10	739.3	10	1,075.8	11	1,427.1	11	1,562.8	13	1,710.4	10
Frozen: $	633.3	7	303.4	8	362.7	7	432.9	7	1,498.6	10	1,316.6	10	1,431.1	10	1,202.3	10
Frozen: lbs	206.6	7	101.1	8	86.0	7	104.2	7	413.9	10	366.4	10	428.8	10	334.8	10
Unprocessed: $	1,225.1	7	664.2	7	1,000.2	12	1,635.6	12	2,291.5	13	2,522.8	10	2,448.6	11	1,507.8	12
Unprocessed: lbs	804.5	7	341.5	7	394.4	12	592.9	12	1,227.7	14	1,500.6	10	1,454.6	11	1,029.0	12
Other: $	0.0	0	0.0	0	***	***	0.0	0	***	***	***	***	***	***	***	***
Other: lbs	0.0	0	0.0	0	***	***	0.0	0	***	***	***	***	***	***	***	***

Table 6.14: Rex sole: Total production by product type for EDC Processors. Rex sole: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	609.1	11	362.8	8	477.7	9	454.0	8	488.5	9	369.7	7	263.8	8	251.0	7
Fresh: lbs	374.4	11	180.8	8	222.0	9	182.7	8	247.3	9	182.5	7	135.0	8	131.3	7
Frozen: $	398.4	7	411.9	6	265.6	7	385.0	8	492.6	8	355.5	7	367.6	9	478.0	7
Frozen: lbs	265.4	7	324.7	6	163.3	7	202.4	8	286.3	8	243.3	7	376.9	9	408.4	7
Unprocessed: $	32.4	6	14.3	6	13.2	7	51.4	6	54.2	8	37.3	8	36.4	11	37.5	9
Unprocessed: lbs	44.8	6	23.9	6	16.4	7	69.1	7	116.1	9	66.5	8	65.9	11	79.4	9
Other: $	0.0	0	***	***	0.0	0	***	***	0.0	0	***	***	***	***	***	***
Other: lbs	0.0	0	***	***	0.0	0	***	***	0.0	0	***	***	***	***	***	***

Table 6.15: Arrowtooth flounder: Total production by product type for EDC Processors. Arrowtooth flounder: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	—	—	—	—	811.7	8	596.1	9	586.6	9	296.3	8	269.7	6	284.2	6
Fresh: lbs	—	—	—	—	723.8	8	567.6	9	495.5	9	250.2	8	225.1	6	238.4	6
Frozen: $	—	—	—	—	845.4	7	1,206.6	9	966.2	9	466.8	9	518.1	8	329.3	6
Frozen: lbs	—	—	—	—	***	***	1,394.3	9	1,365.8	9	422.1	9	456.9	8	318.1	6
Unprocessed: $	—	—	—	—	***	***	6.3	3	33.7	4	***	***	***	***	62.9	7
Unprocessed: lbs	—	—	—	—	1.8	3	50.3	4	199.9	5	***	***	652.8	4	465.4	7
Other: $	—	—	—	—	0.0	0	***	***	0.0	0	0.0	0	0.0	0	0.0	0
Other: lbs	—	—	—	—	0.0	0	***	***	0.0	0	0.0	0	0.0	0	0.0	0

Table 6.16: Lingcod: Total production by product type for EDC Processors. Lingcod: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	341.6	13	293.4	12	760.2	9	1,216.0	10	1,310.4	11	814.2	12	713.6	12	1,076.4	11
Fresh: lbs	90.9	13	67.8	12	190.9	9	311.1	10	313.6	11	173.3	12	151.2	12	247.4	11
Frozen: $	59.7	5	50.8	5	192.8	6	131.2	6	170.5	7	54.7	7	20.1	8	65.2	7
Frozen: lbs	10.0	5	25.0	5	56.1	6	37.4	6	60.6	7	25.0	7	8.8	8	20.0	7
Unprocessed: $	97.5	6	68.5	6	125.5	10	172.3	9	178.8	14	252.2	12	215.3	11	141.2	11
Unprocessed: lbs	78.4	6	42.2	6	46.4	10	69.3	10	82.5	15	86.5	13	81.9	11	61.4	11
Other: $	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Other: lbs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 6.17: Rockfish: Total production by product type for EDC Processors. Rockfish: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	3,042.2	16	2,525.0	15	3,039.0	12	4,278.7	11	3,533.9	12	3,834.0	13	5,530.7	13	3,980.9	11
Fresh: lbs	1,125.6	16	911.4	15	1,075.9	12	1,360.3	11	1,098.1	12	1,304.2	13	1,886.5	13	1,525.5	11
Frozen: $	749.3	8	404.1	8	608.7	9	854.4	10	804.4	10	796.5	11	1,470.4	9	1,288.5	12
Frozen: lbs	377.3	8	216.8	8	330.5	9	438.3	10	559.2	10	704.6	11	1,057.5	9	683.9	12
Unprocessed: $	419.2	7	566.2	7	1,227.8	14	940.2	12	1,564.2	17	1,585.2	14	1,426.8	14	701.2	13
Unprocessed: lbs	345.2	7	531.2	7	820.8	14	762.1	12	930.6	17	1,060.8	14	961.9	14	803.2	13
Other: $	***	***	0.0	0	290.8	3	***	***	***	***	***	***	***	***	583.9	4
Other: lbs	***	***	0.0	0	162.1	3	***	***	***	***	***	***	***	***	436.6	4

Table 6.18: Sanddab: Total production by product type for EDC Processors. Sanddab: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	—	—	—	—	***	***	121.8	6	134.1	7	104.4	7	132.0	6	41.5	6
Fresh: lbs	—	—	—	—	9.3	5	23.7	6	26.2	7	25.7	7	34.4	6	14.3	6
Frozen: $	—	—	—	—	220.9	8	189.1	7	238.8	7	328.9	6	174.8	7	142.8	6
Frozen: lbs	—	—	—	—	69.4	8	40.7	7	51.4	7	75.6	6	37.8	7	29.5	6
Unprocessed: $	—	—	—	—	132.0	6	96.5	7	115.1	9	129.7	8	92.9	8	45.5	5
Unprocessed: lbs	—	—	—	—	105.3	6	72.2	7	83.0	10	91.9	8	76.3	8	31.8	5
Other: $	—	—	—	—	***	***	***	***	***	***	***	***	***	***	***	***
Other: lbs	—	—	—	—	***	***	***	***	***	***	***	***	***	***	***	***

Table 6.19: Sharks, skates and rays: Total production by product type for EDC Processors. Sharks, skates and rays: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	216.6	8	57.8	9	143.1	6	69.3	5	35.7	5	103.3	8	120.2	9	36.7	7
Fresh: lbs	183.8	8	34.7	9	46.4	6	108.9	5	13.1	5	48.7	8	45.8	9	13.1	7
Frozen: $	1,520.3	8	1,690.7	6	1,919.7	8	2,337.1	9	1,871.9	9	2,239.4	9	2,370.8	9	2,299.9	8
Frozen: lbs	1,129.6	8	909.9	6	925.8	8	880.6	9	882.6	9	909.8	10	814.5	9	903.2	9
Unprocessed: $	***	***	190.6	5	432.0	9	232.6	7	62.0	7	75.4	8	55.0	6	45.6	10
Unprocessed: lbs	***	***	318.7	5	492.7	9	321.4	8	147.0	9	287.3	8	168.8	6	509.2	10
Other: $	***	***	0.0	0	***	***	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Other: lbs	***	***	0.0	0	***	***	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0

Table 6.20: Crab: Total production by product type for EDC Processors. Crab: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Canned: $	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Canned: lbs	***	***	***	***	61.2	3	***	***	***	***	***	***	***	***	***	***
Fresh: $	23,121.2	13	34,598.4	16	34,238.7	15	34,333.5	15	46,156.1	15	32,464.9	13	31,472.3	13	49,121.4	12
Fresh: lbs	5,652.1	13	9,763.5	16	6,041.1	15	5,115.8	15	7,998.4	15	4,830.7	13	2,221.0	13	5,508.8	12
Frozen: $	29,367.5	13	49,774.7	15	62,635.0	17	75,195.4	16	78,618.2	16	58,816.3	14	38,427.6	13	75,426.8	15
Frozen: lbs	5,897.0	13	11,744.5	15	10,932.2	17	11,661.0	16	12,640.2	16	7,781.3	14	5,339.4	13	10,492.1	15
Unprocessed: $	948.3	5	1,061.3	4	4,061.4	8	8,982.0	9	5,759.6	11	14,982.9	14	7,699.9	11	21,863.9	13
Unprocessed: lbs	426.1	5	474.4	4	1,040.9	8	2,484.4	9	1,601.2	11	3,316.6	14	1,585.5	11	5,560.9	13
Other: $	3,639.6	3	***	***	***	***	542.1	3	483.0	3	***	***	***	***	5,372.7	7
Other: lbs	***	***	***	***	***	***	42.7	3	30.4	3	***	***	***	***	1,318.2	7

Table 6.21: Shrimp: Total production by product type for EDC Processors. Shrimp: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Canned: $	0.0	0	0.0	0	***	***	***	***	***	***	***	***	***	***	***	***
Canned: lbs	0.0	0	0.0	0	***	***	***	***	***	***	***	***	***	***	***	***
Fresh: $	4,613.9	7	3,465.3	7	3,641.5	6	3,920.3	5	2,940.7	3	3,552.5	3	3,411.7	4	1,476.3	5
Fresh: lbs	3,019.0	7	2,469.2	7	1,178.1	6	1,234.5	5	862.1	3	1,032.9	3	784.7	4	347.9	5
Frozen: $	19,111.9	7	19,156.8	9	53,295.6	11	56,254.0	12	59,142.8	12	86,214.8	14	118,907.3	15	59,131.7	11
Frozen: lbs	6,756.5	7	9,786.8	9	17,762.5	11	18,914.8	12	20,811.5	12	36,853.7	14	56,670.6	15	16,998.2	11
Unprocessed: $	***	***	***	***	1,828.8	4	***	***	92.9	3	931.1	6	955.9	6	2,315.4	7
Unprocessed: lbs	***	***	***	***	916.0	4	30.6	3	88.4	4	1,302.0	6	1,630.7	6	2,271.8	7
Other: $	0.0	0	***	***	0.0	0	0.0	0	0.0	0	***	***	***	***	0.0	0
Other: lbs	0.0	0	***	***	0.0	0	0.0	0	0.0	0	***	***	***	***	0.0	0

Table 6.22: Coastal pelagics: Total production by product type for EDC Processors. Coastal pelagics: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Canned: $	—	—	—	—	***	***	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Canned: lbs	—	—	—	—	***	***	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Fresh: $	701.4	3	***	***	1,266.6	3	***	***	***	***	29.6	3	48.0	4	***	***
Fresh: lbs	2,123.3	3	76.6	3	***	***	***	***	***	***	71.6	3	52.0	4	***	***
Frozen: $	6,125.6	7	4,539.4	6	11,671.3	11	36,616.9	10	17,374.4	8	15,804.5	7	803.6	5	2,941.2	6
Frozen: lbs	14,942.7	7	12,241.5	6	35,701.6	11	115,306.0	10	61,999.6	8	25,522.6	7	2,385.9	5	9,969.4	6
Unprocessed: $	***	***	***	***	74.4	4	***	***	965.7	4	284.7	4	***	***	***	***
Unprocessed: lbs	***	***	***	***	28.9	4	1,248.4	3	5,531.6	5	571.5	4	***	***	***	***
Other: $	5,989.0	3	6,480.2	3	***	***	0.0	0	***	***	0.0	0	0.0	0	***	***
Other: lbs	25,396.5	3	27,659.4	3	***	***	0.0	0	***	***	0.0	0	0.0	0	***	***

Table 6.23: Salmon: Total production by product type for EDC Processors. Salmon: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Canned: $	***	***	***	***	***	***	***	***	***	***	***	***	0.0	0	0.0	0
Canned: lbs	***	***	***	***	***	***	***	***	***	***	***	***	0.0	0	0.0	0
Fresh: $	6,779.2	7	10,620.3	11	15,023.2	14	8,703.9	10	13,160.8	10	17,876.6	12	9,796.8	11	7,730.1	7
Fresh: lbs	1,957.1	7	2,443.5	11	3,509.6	15	1,631.2	10	2,380.3	10	3,999.7	12	1,686.0	11	1,089.7	7
Frozen: $	***	***	6,693.3	9	9,375.8	13	3,387.7	11	19,058.1	14	11,492.0	13	5,383.5	11	***	***
Frozen: lbs	***	***	2,334.4	9	4,373.9	13	1,309.2	11	7,651.8	14	3,083.0	13	***	***	***	***
Smoked: $	***	***	***	***	455.8	3	***	***	***	***	***	***	***	***	***	***
Smoked: lbs	***	***	***	***	48.8	3	***	***	***	***	***	***	***	***	***	***
Unprocessed: $	875.7	3	1,391.8	4	3,005.0	9	7,694.6	9	9,945.8	11	14,955.3	13	8,689.4	13	2,583.6	11
Unprocessed: lbs	251.3	3	265.6	4	630.5	9	1,225.5	10	1,384.4	12	2,173.1	13	1,451.4	13	274.0	11
Other: $	***	***	***	***	0.0	0	0.0	0	***	***	***	***	***	***	***	***
Other: lbs	***	***	***	***	0.0	0	0.0	0	***	***	***	***	***	***	***	***

Table 6.24: Tuna: Total production by product type for EDC Processors. Tuna: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Canned: $	***	***	***	***	***	***	***	***	***	***	***	***	63.3	3	***	***
Canned: lbs	***	***	***	***	***	***	***	***	***	***	***	***	6.3	3	***	***
Fresh: $	632.8	5	634.0	8	863.8	5	494.5	6	257.1	6	917.2	7	688.8	7	810.9	5
Fresh: lbs	189.2	5	156.6	8	184.3	5	184.2	6	67.4	6	191.0	7	175.0	7	190.5	5
Frozen: $	11,339.5	9	11,649.0	12	16,191.6	13	20,491.1	12	18,264.0	12	6,706.4	12	7,991.0	11	13,492.2	9
Frozen: lbs	7,935.2	9	6,726.0	12	6,159.4	13	11,219.2	12	9,032.4	12	3,177.4	12	4,704.0	11	5,365.1	9
Unprocessed: $	***	***	369.1	3	1,682.5	10	1,961.7	7	646.0	9	5,561.7	9	***	***	571.7	6
Unprocessed: lbs	***	***	***	***	803.4	10	1,173.4	7	362.7	9	5,286.1	9	***	***	283.9	6
Other: $	***	***	***	***	0.0	0	***	***	***	***	***	***	0.0	0	***	***
Other: lbs	***	***	***	***	0.0	0	***	***	***	***	***	***	0.0	0	***	***

Table 6.25: California halibut: Total production by product type for EDC Processors. California halibut: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	***	***	707.4	5	581.1	6	17.2	3	88.3	4	344.5	5	276.9	3	***	***
Fresh: lbs	***	***	69.2	5	71.4	6	2.2	3	7.9	4	22.1	5	***	***	***	***
Frozen: $	***	***	***	***	***	***	***	***	0.0	0	***	***	0.0	0	0.0	0
Frozen: lbs	***	***	***	***	***	***	***	***	0.0	0	***	***	0.0	0	0.0	0
Unprocessed: $	504.4	4	403.3	4	609.2	6	449.4	5	682.7	6	629.3	6	669.8	6	634.5	5
Unprocessed: lbs	97.4	4	81.7	4	107.1	6	78.5	5	119.1	6	99.9	6	111.3	6	99.6	5
Other: $	0.0	0	***	***	0.0	0	0.0	0	0.0	0	***	***	0.0	0	0.0	0
Other: lbs	0.0	0	***	***	0.0	0	0.0	0	0.0	0	***	***	0.0	0	0.0	0

Table 6.26: Pacific halibut: Total production by product type for EDC Processors. Pacific halibut: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Fresh: $	3,032.9	5	1,297.1	6	1,572.7	9	785.3	4	1,058.7	4	1,072.2	6	990.7	7	889.2	5
Fresh: lbs	539.5	5	136.2	6	161.8	9	107.7	4	133.4	4	121.7	6	92.4	7	81.9	5
Frozen: $	298.3	4	169.4	4	170.5	4	247.3	5	128.3	5	53.4	5	258.7	4	190.1	4
Frozen: lbs	45.0	4	19.2	4	17.1	4	31.8	5	17.5	5	***	***	30.4	4	23.1	4
Unprocessed: $	***	***	***	***	813.5	5	3,085.5	5	2,677.9	5	3,630.9	5	3,449.2	6	4,375.8	4
Unprocessed: lbs	***	***	***	***	106.2	5	486.1	6	417.9	6	479.8	5	443.8	6	537.5	4
Other: $	***	***	***	***	***	***	0.0	0	***	***	0.0	0	***	***	***	***
Other: lbs	***	***	***	***	***	***	0.0	0	***	***	0.0	0	***	***	***	***

Table 6.27: Other: Total production by product type for EDC Processors. Other: Total production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Bait: $	—	—	—	—	***	***	835.0	3	1,346.7	5	1,585.7	3	1,214.3	7	1,853.2	5
Bait: lbs	—	—	—	—	***	***	1,881.4	3	2,174.6	5	2,869.2	3	2,445.3	7	2,768.2	5
Canned: $	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Canned: lbs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Fish oil: $	***	***	***	***	***	***	***	***	***	***	0.0	0	***	***	0.0	0
Fish oil: lbs	***	***	***	***	***	***	***	***	***	***	0.0	0	***	***	0.0	0
Fishmeal: $	***	***	***	***	***	***	***	***	***	***	0.0	0	***	***	***	***
Fishmeal: lbs	***	***	***	***	***	***	***	***	***	***	0.0	0	***	***	***	***
Fresh: $	699.4	6	1,355.5	6	9,801.4	11	9,995.7	7	12,539.5	7	10,517.6	6	6,990.6	6	5,186.2	4
Fresh: lbs	125.0	6	237.2	6	1,008.2	11	1,044.9	7	1,109.1	7	1,012.4	6	762.3	6	***	***
Frozen: $	1,364.4	7	1,856.7	8	1,809.8	8	902.8	6	878.3	5	916.3	8	326.0	6	***	***
Frozen: lbs	401.6	7	888.9	8	469.9	8	697.0	6	409.9	5	558.6	8	408.2	6	***	***
Unprocessed: $	7,591.0	4	6,481.6	3	6,723.0	6	9,919.9	6	13,682.7	5	7,305.7	7	7,868.6	5	9,536.4	6
Unprocessed: lbs	2,228.1	4	1,836.5	3	2,083.6	6	15,101.3	7	***	***	1,845.8	7	1,825.9	5	1,736.1	6
Other: $	7,070.4	12	12,156.5	12	3,296.3	15	4,055.9	13	9,317.4	16	6,399.5	13	15,190.6	15	5,692.3	16
Other: lbs	28,927.4	12	42,552.3	12	8,036.3	15	9,374.9	13	41,798.2	17	***	***	15,007.9	15	11,837.1	18

6.6 Average value and weight of fish production by product type and species

Table 6.28: Pacific whiting: Average production by product type for EDC Processors. Pacific whiting: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fillet: $	1,971.3	3	2,408.4	4	4,067.7	3	2,288.7	3	***	***	***	***	***	***	2,408.6	3
Fillet: lbs	1,800.6	3	2,050.9	4	6,245.2	3	2,291.5	3	***	***	5,388.1	3	1,445.5	3	2,522.3	3
Frozen: $	***	***	313.1	4	1,510.6	6	687.3	6	722.0	9	426.0	6	748.2	6	317.8	6
Frozen: lbs	***	***	938.3	4	5,197.6	6	1,303.9	6	2,868.6	9	1,425.3	6	2,616.7	6	1,448.1	6
Headed-and-gutted: $	3,598.8	10	1,926.2	10	4,602.2	9	3,646.0	8	5,138.4	8	4,365.4	8	2,460.0	7	3,408.5	7
Headed-and-gutted: lbs	6,439.6	10	3,424.4	10	8,212.2	9	5,643.3	8	10,321.9	8	8,593.4	8	6,650.6	7	7,978.8	7
Roe: $		0		0		0		0		0		0		0		0
Roe: lbs		0		0		0		0		0		0		0		0
Surimi: $	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Surimi: lbs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unprocessed: $	***	***	11.6	3	***	***	***	***	***	***	***	***	***	***	104.4	4
Unprocessed: lbs	***	***	110.7	3	***	***	1,595.6	3	***	***	***	***	***	***	1,855.1	4
Other: $	***	***	***	***	***	***	***	***	***	***	***	***	40.4	3	280.4	4
Other: lbs	***	***	***	***	***	***	***	***	***	***	5,294.5	4	3,449.0	3	2,780.9	4

Table 6.29: Dover sole: Average production by product type for EDC Processors. Dover sole: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	1,192.5⁝	12	1,253.0⁝	11	1,201.5⁝	10	1,057.3⁝	12	1,301.5⁝	10	1,019.6⁝	11	1,109.0⁝	9	1,005.4⁝	10
Fresh: lbs	532.1⁝	12	497.4⁝	11	360.7⁝	10	302.6⁝	12	367.8⁝	10	282.5⁝	11	318.5⁝	9	305.8⁝	10
Frozen: $	272.4⁝	10	180.9⁝	11	146.5⁝	11	249.9⁝	10	259.5⁝	10	195.0⁝	9	257.9⁝	9	324.7⁝	9
Frozen: lbs	127.0⁝	10	115.2⁝	11	55.1⁝	11	99.7⁝	10	129.1⁝	10	55.3⁝	9	94.3⁝	9	146.5⁝	9
Unprocessed: $	5.4⁝	5	15.4⁝	7	8.4⁝	8	16.5⁝	8	82.0⁝	6	53.7⁝	6	39.5⁝	9	48.9⁝	7
Unprocessed: lbs	10.4⁝	5	22.3⁝	7	11.5⁝	8	77.5⁝	10	146.9⁝	7	94.3⁝	6	81.4⁝	9	97.6⁝	8
Other: $	***	***	***	***		0	***	***	***	***		0		0	***	***
Other: lbs	***	***	***	***		0	***	***	***	***		0		0	***	***

Table 6.30: Sablefish: Average production by product type for EDC Processors. Sablefish: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	456.1⁝	11	501.2⁝	13	508.9⁝	12	263.5⁝	13	251.3⁝	13	310.2⁝	13	296.2⁝	13	406.1⁝	10
Fresh: lbs	112.1⁝	11	95.1⁝	13	152.9⁝	12	51.7⁝	13	66.1⁝	13	48.7⁝	13	42.7⁝	13	58.0⁝	10
Frozen: $	2,465.0⁝	11	2,317.7⁝	13	2,525.5⁝	12	2,014.8⁚	13	1,284.3⁝	14	1,538.7⁚	12	2,809.1⁚	10	2,930.2⁝	11
Frozen: lbs	502.5⁝	11	430.7⁝	13	352.6⁚	12	362.6⁚	13	265.8⁝	14	277.0⁚	12	481.9⁚	10	438.6⁚	11
Unprocessed: $	524.5⁚	3	406.5⁝	5	169.7⁝	9	201.1⁝	7	170.6⁝	11	266.5⁝	11	248.6⁝	11	220.9⁝	13
Unprocessed: lbs	186.8⁚	3	141.3⁝	5	42.0⁝	9	66.7⁝	8	65.1⁝	12	93.7⁝	11	80.3⁝	11	71.3⁝	13
Other: $	***	***	***	***		0	91.1⁚	4	***	***	***	***	***	***	***	***
Other: lbs	***	***	***	***		0	16.9⁚	4	***	***	***	***	***	***	***	***

Table 6.31: Thornyheads: Average production by product type for EDC Processors. Thornyheads: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	46.5⁝	5	58.1⁝	6	3.4⁝	3	***	***	***	***	89.1⁝	7	37.0⁝	4	148.6⁝	5
Fresh: lbs	38.7⁝	5	49.5⁝	6	1.8⁝	3	***	***	***	***	26.5⁝	8	16.8⁝	4	50.5⁝	5
Frozen: $	602.3⁚	7	643.8⁚	7	482.8⁚	8	561.7⁚	9	501.8⁝	10	336.8⁝	9	381.7⁚	9	147.0⁝	10
Frozen: lbs	256.8⁚	7	290.6⁚	7	141.4⁚	8	154.2⁚	9	165.9⁝	10	107.3⁝	9	122.5⁚	9	52.3⁝	10
Unprocessed: $	34.8⁝	3	35.3⁚	5	46.9⁝	10	66.3⁚	9	112.3⁚	9	201.3⁚	7	97.6⁝	11	107.0⁝	12
Unprocessed: lbs	28.3⁝	3	36.2⁚	5	31.3⁝	10	37.7⁝	10	74.3⁝	10	114.9⁚	7	48.9⁝	11	68.4⁝	12
Other: $		0	***	***	***	***	***	***		0		0		0	***	***
Other: lbs		0	***	***	***	***	***	***		0		0		0	***	***

Table 6.32: English sole: Average production by product type for EDC Processors. English sole: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	40.8⁝	11	23.0⁝	10	27.7⁝	8	34.3⁝	9	31.8⁝	9	35.7⁝	8	54.9⁝	8	54.2⁝	8
Fresh: lbs	19.1⁝	11	9.9⁝	10	8.7⁝	8	10.1⁝	9	9.9⁝	9	10.8⁝	8	17.7⁝	8	20.5⁝	8
Frozen: $	16.4⁚	6	11.8⁚	4	7.6⁝	5	8.4⁝	8	23.5⁝	9	9.9⁝	9	14.2⁝	8	14.9⁝	7
Frozen: lbs	13.5⁝	6	10.8⁝	4	3.1⁝	5	7.6⁝	8	15.4⁝	9	7.1⁝	9	15.1⁝	8	17.8⁝	7
Unprocessed: $	4.8·	3	1.6⁝	6	1.1⁚	5	1.2⁚	6	15.6⁝	8	3.6⁝	6	3.2⁝	6	2.1⁝	7
Unprocessed: lbs	7.2·	3	2.5⁝	6	1.2⁚	5	1.3⁝	7	17.2⁝	8	5.2⁝	7	5.3⁝	6	4.9⁝	7
Other: $		0		0		0		0		0		0		0		0
Other: lbs		0		0		0		0		0		0		0		0

Table 6.33: Petrale sole: Average production by product type for EDC Processors. Petrale sole: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	454.2	11	135.3	13	237.8	10	387.4	10	517.1	11	644.0	11	588.6	13	894.4	9
Fresh: lbs	131.5	11	33.2	13	43.2	10	73.9	10	97.8	11	129.7	11	120.2	13	171.0	10
Frozen: $	90.5	7	37.9	8	51.8	7	61.8	7	149.9	10	131.7	10	143.1	10	120.2	10
Frozen: lbs	29.5	7	12.6	8	12.3	7	14.9	7	41.4	10	36.6	10	42.9	10	33.5	10
Unprocessed: $	175.0	7	94.9	7	83.3	12	136.3	12	176.3	13	252.3	10	222.6	11	125.6	12
Unprocessed: lbs	114.9	7	48.8	7	32.9	12	49.4	12	87.7	14	150.1	10	132.2	11	85.7	12
Other: $		0		0	***	***		0	***	***	***	***	***	***	***	***
Other: lbs		0		0	***	***		0	***	***	***	***	***	***	***	***

Table 6.34: Rex sole: Average production by product type for EDC Processors. Rex sole: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	55.4⁝	11	45.3⁚	8	53.1⁚	9	56.8⁚	8	54.3⁝	9	52.8⁝	7	33.0⁝	8	35.9⁝	7
Fresh: lbs	34.0⁝	11	22.6⁚	8	24.7⁝	9	22.8⁚	8	27.5⁝	9	26.1⁝	7	16.9⁝	8	18.8⁝	7
Frozen: $	56.9⁚	7	68.6⁚	6	37.9⁝	7	48.1⁝	8	61.6⁝	8	50.8⁝	7	40.8⁝	9	68.3⁝	7
Frozen: lbs	37.9⁝	7	54.1⁚	6	23.3⁝	7	25.3⁚	8	35.8⁝	8	34.8⁝	7	41.9⁝	9	58.3⁝	7
Unprocessed: $	5.4⁚	6	2.4⁝	6	1.9⁝	7	8.6⁝	6	6.8⁝	8	4.7⁝	8	3.3⁝	11	4.2⁝	9
Unprocessed: lbs	7.5⁚	6	4.0⁝	6	2.3⁝	7	9.9⁝	7	12.9⁝	9	8.3⁝	8	6.0⁝	11	8.8⁝	9
Other: $		0	***	***		0	***	***		0	***	***	***	***	***	***
Other: lbs		0	***	***		0	***	***		0	***	***	***	***	***	***

Table 6.35: Arrowtooth flounder: Average production by product type for EDC Processors. Arrowtooth flounder: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	—	—	—	—	101.5⁝	8	66.2⁝	9	65.2⁝	9	37.0⁝	8	44.9⁝	6	47.4⁝	6
Fresh: lbs	—	—	—	—	90.5⁝	8	63.1⁝	9	55.1⁝	9	31.3⁝	8	37.5⁝	6	39.7⁝	6
Frozen: $	—	—	—	—	120.8⁝	7	134.1⁝	9	107.4⁝	9	51.9⁝	9	64.8⁝	8	54.9⁝	6
Frozen: lbs	—	—	—	—	***	***	154.9⁝	9	151.8⁝	9	46.9⁝	9	57.1⁝	8	53.0⁝	6
Unprocessed: $	—	—	—	—	***	***	2.1⁝	3	8.4⁝	4	***	***	***	***	9.0⁝	7
Unprocessed: lbs	—	—	—	—	0.6⁝	3	12.6⁝	4	40.0⁝	5	***	***	163.2⁝	4	66.5⁝	7
Other: $	—	—	—	—		0	***	***		0		0		0		0
Other: lbs	—	—	—	—		0	***	***		0		0		0		0

Table 6.36: Lingcod: Average production by product type for EDC Processors. Lingcod: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	26.3⁞	13	24.5⁞	12	84.5⁞	9	121.6⁞	10	119.1⁞	11	67.9⁞	12	59.5⁞	12	97.9⁞	11
Fresh: lbs	7.0⁞	13	5.7⁞	12	21.2⁞	9	31.1⁞	10	28.5⁞	11	14.4⁞	12	12.6⁞	12	22.5⁞	11
Frozen: $	11.9⁞	5	10.2⁞	5	32.1⁞	6	21.9⁞	6	24.4⁚	7	7.8⁚	7	2.5⁚	8	9.3⁞	7
Frozen: lbs	2.0⁞	5	5.0⁚	5	9.4⁞	6	6.2⁞	6	8.7⁚	7	3.6˙	7	1.1⁚	8	2.9⁞	7
Unprocessed: $	16.2⁞	6	11.4⁚	6	12.6⁞	10	19.1⁞	9	12.8⁞	14	21.0⁞	12	19.6⁞	11	12.8⁞	11
Unprocessed: lbs	13.1⁞	6	7.0⁚	6	4.6⁞	10	6.9⁞	10	5.5⁞	15	6.7⁞	13	7.4⁞	11	5.6⁞	11
Other: $	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Other: lbs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 6.37: Rockfish: Average production by product type for EDC Processors. Rockfish: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	190.1⁝	16	168.3⁝	15	253.3⁝	12	389.0⁝	11	294.5⁝	12	294.9⁝	13	425.4⁝	13	361.9⁝	11
Fresh: lbs	70.4⁝	16	60.8⁝	15	89.7⁝	12	123.7⁝	11	91.5⁝	12	100.3⁝	13	145.1⁝	13	138.7⁝	11
Frozen: $	93.7⁝	8	50.5⁝	8	67.6⁝	9	85.4⁝	10	80.4⁝	10	72.4⁝	11	163.4⁝	9	107.4⁝	12
Frozen: lbs	47.2⁝	8	27.1⁝	8	36.7⁝	9	43.8⁝	10	55.9⁝	10	64.1⁝	11	117.5⁝	9	57.0⁝	12
Unprocessed: $	59.9⁝	7	80.9⁝	7	87.7⁝	14	78.4⁝	12	92.0⁝	17	113.2⁝	14	101.9⁝	14	53.9⁝	13
Unprocessed: lbs	49.3⁝	7	75.9⁝	7	58.6⁝	14	63.5⁝	12	54.7⁝	17	75.8⁝	14	68.7⁝	14	61.8⁝	13
Other: $	***	***		0	96.9⁝	3	***	***	***	***	***	***	***	***	146.0⁝	4
Other: lbs	***	***		0	54.0⁝	3	***	***	***	***	***	***	***	***	109.2⁝	4

Table 6.38: Sanddab: Average production by product type for EDC Processors. Sanddab: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	—	—	—	—	***	***	20.3⁝	6	19.2⁝	7	14.9⁝	7	22.0⁝	6	6.9⁝	6
Fresh: lbs	—	—	—	—	1.9⁝	5	3.9⁝	6	3.7⁝	7	3.7⁝	7	5.7⁝	6	2.4⁝	6
Frozen: $	—	—	—	—	27.6⁝	8	27.0⁝	7	34.1⁝	7	54.8⁝	6	25.0⁝	7	23.8⁝	6
Frozen: lbs	—	—	—	—	8.7⁝	8	5.8⁝	7	7.3⁝	7	12.6⁝	6	5.4⁝	7	4.9⁝	6
Unprocessed: $	—	—	—	—	22.0⁝	6	13.8⁝	7	12.8⁝	9	16.2⁝	8	11.6⁝	8	9.1⁝	5
Unprocessed: lbs	—	—	—	—	17.6⁝	6	10.3⁝	7	8.3⁝	10	11.5⁝	8	9.5⁝	8	6.4⁝	5
Other: $	—	—	—	—	***	***	***	***	***	***	***	***	***	***	***	***
Other: lbs	—	—	—	—	***	***	***	***	***	***	***	***	***	***	***	***

Table 6.39: Sharks, skates and rays: Average production by product type for EDC Processors. Sharks, skates and rays: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	27.1⁝	8	6.4⁚	9	23.8⁚	6	13.9⁝	5	7.1⁝	5	12.9⁚	8	13.4⁚	9	5.2⁝	7
Fresh: lbs	23.0⁝	8	3.9⁚	9	7.7⁚	6	21.8⁝	5	2.6⁝	5	6.1⁝	8	5.1⁝	9	1.9⁚	7
Frozen: $	190.0⁚	8	281.8⁚	6	240.0⁝	8	259.7⁝	9	208.0⁝	9	248.8⁝	9	263.4⁝	9	287.5⁝	8
Frozen: lbs	141.2⁝	8	151.7⁚	6	115.7⁚	8	97.8⁝	9	98.1⁝	9	91.0⁝	10	90.5⁝	9	100.4⁝	9
Unprocessed: $	***	***	38.1⁚	5	48.0⁝	9	33.2⁝	7	8.9⁝	7	9.4⁝	8	9.2⁚	6	4.6⁝	10
Unprocessed: lbs	***	***	63.7⁝	5	54.7⁝	9	40.2⁝	8	16.3⁝	9	35.9⁝	8	28.1⁚	6	50.9⁝	10
Other: $	***	***		0	***	***		0		0		0		0		0
Other: lbs	***	***		0	***	***		0		0		0		0		0

Table 6.40: Crab: Average production by product type for EDC Processors. Crab: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Canned: $	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Canned: lbs	***	***	***	***	20.4⁝	3	***	***	***	***	***	***	***	***	***	***
Fresh: $	1,778.6⁝	13	2,162.4⁝	16	2,282.6⁝	15	2,288.9⁝	15	3,077.1⁝	15	2,497.3⁝	13	2,420.9⁝	13	4,093.4⁝	12
Fresh: lbs	434.8⁝	13	610.2⁝	16	402.7⁝	15	341.1⁝	15	533.2⁝	15	371.6⁝	13	170.8⁝	13	459.1⁝	12
Frozen: $	2,259.0⁝	13	3,318.3⁝	15	3,684.4⁝	17	4,699.7⁝	16	4,913.6⁝	16	4,201.2⁝	14	2,956.0⁝	13	5,028.5⁝	15
Frozen: lbs	453.6⁝	13	783.0⁝	15	643.1⁝	17	728.8⁝	16	790.0⁝	16	555.8⁝	14	410.7⁝	13	699.5⁝	15
Unprocessed: $	189.7⁝	5	265.3⁝	4	507.7⁝	8	998.0⁝	9	523.6⁝	11	1,070.2⁝	14	700.0⁝	11	1,681.8⁝	13
Unprocessed: lbs	85.2⁝	5	118.6⁝	4	130.1⁝	8	276.0⁝	9	145.6⁝	11	236.9⁝	14	144.1⁝	11	427.8⁝	13
Other: $	1,213.2⁝	3	***	***	***	***	180.7⁝	3	161.0⁝	3	***	***	***	***	767.5⁝	7
Other: lbs	***	***	***	***	***	***	14.2⁝	3	10.1⁝	3	***	***	***	***	188.3⁝	7

Table 6.41: Shrimp: Average production by product type for EDC Processors. Shrimp: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Canned: $		0		0	***	***	***	***	***	***	***	***	***	***	***	***
Canned: lbs		0		0	***	***	***	***	***	***	***	***	***	***	***	***
Fresh: $	659.1⁝	7	495.0⁝	7	606.9⁝	6	784.1⁝	5	980.2⁝	3	1,184.2⁝	3	852.9⁝	4	295.3⁝	5
Fresh: lbs	431.3⁝	7	352.7⁝	7	196.4⁝	6	246.9⁝	5	287.4⁝	3	344.3⁝	3	196.2⁝	4	69.6⁝	5
Frozen: $	2,730.3⁝	7	2,128.5⁝	9	4,845.1⁝	11	4,687.8⁝	12	4,928.6⁝	12	6,158.2⁝	14	7,927.2⁝	15	5,375.6⁝	11
Frozen: lbs	965.2⁝	7	1,087.4⁝	9	1,614.8⁝	11	1,576.2⁝	12	1,734.3⁝	12	2,632.4⁝	14	3,778.0⁝	15	1,545.3⁝	11
Unprocessed: $	***	***	***	***	457.2⁝	4	***	***	31.0⁝	3	155.2⁝	6	159.3⁝	6	330.8⁝	7
Unprocessed: lbs	***	***	***	***	229.0⁝	4	10.2⁝	3	22.1⁝	4	217.0⁝	6	271.8⁝	6	324.5⁝	7
Other: $		0	***	***		0		0		0	***	***	***	***		0
Other: lbs		0	***	***		0		0		0	***	***	***	***		0

Table 6.42: Coastal pelagics: Average production by product type for EDC Processors. Coastal pelagics: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Canned: $	—	—	—	—	***	***		0		0		0		0		0
Canned: lbs	—	—	—	—	***	***		0		0		0		0		0
Fresh: $	233.8⁝	3	***	***	422.2⁝	3	***	***	***	***	9.9⁝	3	12.0⁝	4	***	***
Fresh: lbs	707.8⁝	3	25.5⁝	3	***	***	***	***	***	***	23.9⁝	3	13.0⁝	4	***	***
Frozen: $	875.1⁝	7	756.6⁝	6	1,061.0⁝	11	3,661.7⁝	10	2,171.8⁝	8	2,257.8⁝	7	160.7⁝	5	490.2⁝	6
Frozen: lbs	2,134.7⁝	7	2,040.3⁝	6	3,245.6⁝	11	11,530.6⁝	10	7,750.0⁝	8	3,646.1⁝	7	477.2⁝	5	1,661.6⁝	6
Unprocessed: $	***	***	***	***	18.6⁝	4	***	***	241.4⁝	4	71.2⁝	4	***	***	***	***
Unprocessed: lbs	***	***	***	***	7.2⁝	4	416.1·	3	1,106.3⁝	5	142.9⁝	4	***	***	***	***
Other: $	1,996.3⁝	3	2,160.1⁝	3	***	***		0	***	***		0		0	***	***
Other: lbs	8,465.5⁝	3	9,219.8⁝	3	***	***		0	***	***		0		0	***	***

Table 6.43: Salmon: Average production by product type for EDC Processors. Salmon: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Canned: $	***	***	***	***	***	***	***	***	***	***	***	***		0		0
Canned: lbs	***	***	***	***	***	***	***	***	***	***	***	***		0		0
Fresh: $	968.5⁝	7	965.5⁝	11	1,073.1⁝	14	870.4⁝	10	1,316.1⁝	10	1,489.7⁝	12	890.6⁝	11	1,104.3⁝	7
Fresh: lbs	279.6⁝	7	222.1⁝	11	234.0⁝	15	163.1⁝	10	238.0⁝	10	333.3⁝	12	153.3⁝	11	155.7⁝	7
Frozen: $	***	***	743.7⁝	9	721.2⁝	13	308.0⁝	11	1,361.3⁝	14	884.0⁝	13	489.4⁝	11	***	***
Frozen: lbs	***	***	259.4⁝	9	336.5⁝	13	119.0⁝	11	546.6⁝	14	237.2⁝	13	***	***	***	***
Smoked: $	***	***	***	***	151.9⁝	3	***	***	***	***	***	***	***	***	***	***
Smoked: lbs	***	***	***	***	16.3⁝	3	***	***	***	***	***	***	***	***	***	***
Unprocessed: $	291.9⁝	3	347.9⁝	4	333.9⁝	9	855.0⁝	9	904.2⁝	11	1,150.4⁝	13	668.4⁝	13	234.9⁝	11
Unprocessed: lbs	83.8⁝	3	66.4⁝	4	70.1⁝	9	122.6⁝	10	115.4⁝	12	167.2⁝	13	111.6⁝	13	24.9⁝	11
Other: $	***	***	***	***		0		0	***	***	***	***	***	***	***	***
Other: lbs	***	***	***	***		0		0	***	***	***	***	***	***	***	***

Table 6.44: Tuna: Average production by product type for EDC Processors. Tuna: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Canned: $	***	***	***	***	***	***	***	***	***	***	***	***	21.1⁝	3	***	***
Canned: lbs	***	***	***	***	***	***	***	***	***	***	***	***	2.1˙	3	***	***
Fresh: $	126.6⁝	5	79.2⁝	8	172.8⁝	5	82.4⁝	6	42.9⁝	6	131.0⁝	7	98.4⁝	7	162.2⁝	5
Fresh: lbs	37.8⁝	5	19.6⁝	8	36.9⁝	5	30.7⁝	6	11.2⁝	6	27.3⁝	7	25.0⁝	7	38.1⁝	5
Frozen: $	1,259.9⁝	9	970.7⁝	12	1,245.5⁝	13	1,707.6⁝	12	1,522.0⁝	12	558.9⁝	12	726.5⁝	11	1,499.1⁝	9
Frozen: lbs	881.7⁝	9	560.5⁝	12	473.8⁝	13	934.9⁝	12	752.7⁝	12	264.8⁝	12	427.6⁝	11	596.1⁝	9
Unprocessed: $	***	***	123.0⁝	3	168.3⁝	10	280.2⁝	7	71.8⁝	9	618.0⁝	9	***	***	95.3⁝	6
Unprocessed: lbs	***	***	***	***	80.3⁝	10	167.6⁝	7	40.3⁝	9	587.3⁝	9	***	***	47.3⁝	6
Other: $	***	***	***	***		0	***	***	***	***	***	***		0	***	***
Other: lbs	***	***	***	***		0	***	***	***	***	***	***		0	***	***

Table 6.45: California halibut: Average production by product type for EDC Processors. California halibut: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	***	***	141.5⁝	5	96.8⁝	6	5.7⁝	3	22.1⁝	4	68.9⁝	5	92.3⁝	3	***	***
Fresh: lbs	***	***	13.8⁝	5	11.9⁝	6	0.7⁝	3	2.0⁝	4	4.4⁝	5	***	***	***	***
Frozen: $	***	***	***	***	***	***	***	***		0	***	***		0		0
Frozen: lbs	***	***	***	***	***	***	***	***		0	***	***		0		0
Unprocessed: $	126.1⁝	4	100.8⁝	4	101.5⁝	6	89.9⁝	5	113.8⁝	6	104.9⁝	6	111.6⁝	6	126.9⁝	5
Unprocessed: lbs	24.4⁝	4	20.4⁝	4	17.8⁝	6	15.7⁝	5	19.9⁝	6	16.7⁝	6	18.6⁝	6	19.9⁝	5
Other: $		0	***	***		0		0		0	***	***		0		0
Other: lbs		0	***	***		0		0		0	***	***		0		0

Table 6.46: Pacific halibut: Average production by product type for EDC Processors. Pacific halibut: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Fresh: $	606.6⁝	5	216.2⁝	6	174.7⁝	9	196.3⁝	4	264.7⁝	4	178.7⁝	6	141.5⁝	7	177.8⁝	5
Fresh: lbs	107.9⁝	5	22.7⁝	6	18.0⁝	9	26.9⁝	4	33.4⁝	4	20.3⁝	6	13.2⁝	7	16.4⁝	5
Frozen: $	74.6⁝	4	42.4⁝	4	42.6⁝	4	49.5⁝	5	25.7⁝	5	10.7⁝	5	64.7⁝	4	47.5⁝	4
Frozen: lbs	11.2⁝	4	4.8⁝	4	4.3⁝	4	6.4⁝	5	3.5⁝	5	***	***	7.6⁝	4	5.8⁝	4
Unprocessed: $	***	***	***	***	162.7⁝	5	617.1⁝	5	535.6⁝	5	726.2⁝	5	574.9⁝	6	1,093.9⁝	4
Unprocessed: lbs	***	***	***	***	21.2⁝	5	81.0⁝	6	69.6⁝	6	96.0⁝	5	74.0⁝	6	134.4⁝	4
Other: $	***	***	***	***	***	***		0	***	***		0	***	***	***	***
Other: lbs	***	***	***	***	***	***		0	***	***		0	***	***	***	***

Table 6.47: Other: Average production by product type for EDC Processors. Other: Average production weight (thousands of lbs) and value (thousands of $) by product type. (N = number of EDC Processors with non-zero, non-NA responses).

Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Bait: $	—	—	—	—	***	***	278.3⁝	3	269.3⁝	5	528.6⁝	3	173.5⁝	7	370.6⁝	5
Bait: lbs	—	—	—	—	***	***	627.1⁝	3	434.9⁝	5	956.4⁝	3	349.3⁝	7	553.6⁝	5
Canned: $		0		0		0		0		0		0		0		0
Canned: lbs		0		0		0		0		0		0		0		0
Fish oil: $	***	***	***	***	***	***	***	***	***	***		0	***	***		0
Fish oil: lbs	***	***	***	***	***	***	***	***	***	***		0	***	***		0
Fishmeal: $	***	***	***	***	***	***	***	***	***	***		0	***	***	***	***
Fishmeal: lbs	***	***	***	***	***	***	***	***	***	***		0	***	***	***	***
Fresh: $	116.6⁝	6	225.9⁝	6	891.0⁝	11	1,428.0⁝	7	1,791.4⁝	7	1,752.9⁝	6	1,165.1⁝	6	1,296.6⁝	4
Fresh: lbs	20.8⁝	6	39.5⁝	6	91.7⁝	11	149.3⁝	7	158.4⁝	7	168.7⁝	6	127.0⁝	6	***	***
Frozen: $	194.9⁝	7	232.1⁝	8	226.2⁝	8	150.5⁝	6	175.7⁝	5	114.5⁝	8	54.3⁝	6	***	***
Frozen: lbs	57.4⁝	7	111.1⁝	8	58.7⁝	8	116.2⁝	6	82.0⁝	5	69.8⁝	8	68.0⁝	6	***	***
Unprocessed: $	1,897.8⁝	4	2,160.5⁝	3	1,120.5⁝	6	1,653.3⁝	6	2,736.5⁝	5	1,043.7⁝	7	1,573.7⁝	5	1,589.4⁝	6
Unprocessed: lbs	557.0⁝	4	612.1⁝	3	347.3⁝	6	2,157.3⁝	7	***	***	263.7⁝	7	365.2⁝	5	289.3⁝	6
Other: $	589.2⁝	12	1,013.0⁝	12	219.8⁝	15	312.0⁝	13	582.3⁝	16	492.3⁝	13	1,012.7⁝	15	355.8⁝	16
Other: lbs	2,410.6⁝	12	3,546.0⁝	12	535.8⁝	15	721.1⁝	13	2,458.7⁝	17	***	***	1,000.5⁝	15	657.6⁝	18

EDC Non-Processors

This section of the report summarizes information about first receivers that report no processing activity. These companies have first receiver site licenses but do not process any fish. For the purposes of this report, such first receivers are called "EDC Non-Processors." In 2009 and 2010, only entities that processed groundfish were required to fill out the entire EDC form. From 2011 onward, all entities with a first receiver site license were required to fill out the entire form. Thus, this section will only report summary statistics for 2011 onward.

7 Facility Value

7.1 Appraisal value of facility

Table 7.1: Value of facility for EDC Non-Processors. Market value and replacement value of facility from the most recent appraisal (thousands of $) (N = number of EDC Non-Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Market value	—	—	—	—	$267:	3	$267:	3	***	***	***	***	***	***	***	***
Replacement value	—	—	—	—	***	***	***	***	***	***		0	***	***	***	***

8 Employment

This section describes the employment information for EDC Non-Processors. Refer to Section 3 for more details on employment information collected on the EDC form.

8.1 Production workers

Table 8.1: Weekly employment: Number of production workers for EDC Non-Processors. Number of production workers for the week that includes the 12th of the month (N = number of EDC Non-Processors with non-zero, non-NA responses).

Month	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
January	—	—	—	—	10˙	4	12:	4	12:	3	***	***	***	***	8:	3
February	—	—	—	—	10˙	4	9:	4	11:	3	***	***	***	***	8:	3
March	—	—	—	—	10:	4	8:	4	8:	3	***	***	***	***	7:	3
April	—	—	—	—	10:	5	12:	4	9:	3	***	***	***	***	7:	3
May	—	—	—	—	11:	5	16:	4	9:	3	***	***	***	***	7:	3
June	—	—	—	—	11:	5	13:	4	9:	3	***	***	***	***	6:	3
July	—	—	—	—	16:	5	16:	4	10:	3	***	***	***	***	7:	3
August	—	—	—	—	14:	5	18:	4	11:	3	***	***	***	***	7:	3
September	—	—	—	—	19⁝	5	18:	4	10:	3	***	***	***	***	7:	3
October	—	—	—	—	12:	5	20:	4	9:	3	***	***	***	***	7:	3
November	—	—	—	—	14:	5	19:	4	11:	3	***	***	***	***	7˙	3
December	—	—	—	—	12:	5	12:	4	9:	3	***	***	***	***	9˙	3

Table 8.2: Weekly employment: Production worker hours for EDC Non-Processors. Hours worked by production workers for the week that includes the 12th of the month (N = number of EDC Non-Processors with non-zero, non-NA responses).

Month	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
January	—	—	—	—	555.9⁝	4	266.6·	4	284.8⁝	3	***	***	***	***	291.8⁝	3
February	—	—	—	—	408.8⁝	4	206.0⁝	4	316.8⁝	3	***	***	***	***	281.3⁝	3
March	—	—	—	—	383.6⁝	4	192.0⁝	4	230.6⁝	3	***	***	***	***	138.7⁝	3
April	—	—	—	—	382.3⁝	5	225.1⁝	4	196.6⁝	3	***	***	***	***	167.5⁝	3
May	—	—	—	—	535.4⁝	5	323.6⁝	4	303.3⁝	3	***	***	***	***	177.3⁝	3
June	—	—	—	—	641.4⁝	5	303.7⁝	4	235.8⁝	3	***	***	***	***	211.7⁝	3
July	—	—	—	—	608.3⁝	5	397.5⁝	4	243.6·	3	***	***	***	***	191.5⁝	3
August	—	—	—	—	601.7⁝	5	519.6⁝	4	253.1⁝	3	***	***	***	***	204.3⁝	3
September	—	—	—	—	737.0⁝	5	461.4⁝	4	252.8⁝	3	***	***	***	***	162.7⁝	3
October	—	—	—	—	533.7⁝	5	593.7⁝	4	231.7⁝	3	***	***	***	***	224.2⁝	3
November	—	—	—	—	684.2⁝	5	458.9⁝	4	290.5⁝	3	***	***	***	***	140.5·	3
December	—	—	—	—	642.2⁝	5	219.6·	4	316.8⁝	3	***	***	***	***	272.2⁝	3

8.2 Non-production employees

Table 8.3: Weekly employment: Non-production employees for EDC Non-Processors. Number of non-production employees and hours worked for the week that includes March 12th (N = number of EDC Non-Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Hours Worked	—	—	—	—	62.7⁝	7	67.3⁝	6	84.2·	3	***	***	***	***	***	***
Number of employees	—	—	—	—	1.9·	7	2.2·	6	2.7·	3	***	***	***	***	***	***

8.3 Compensation

Hourly compensation for each EDC Non-Processor is calculated by dividing annual labor expenses (Section 4.2) by an estimate of total annual hours worked. The EDC form requests information on the number of employees and total hours worked for the week including the 12th day of the month for production workers and for the week including the 12th day in March for non-production employees. Estimates of total annual hours worked for each company are calculated by assuming that employment information for the week of the 12th is representative of the entire month and by weighting each month equally using the following formula:

$$\sum_{m=1}^{12} \left(\frac{hours_m}{week_m} \right) * \frac{52}{12}$$

Table 8.4: Hourly compensation for EDC Non-Processors. Average hourly compensation ($) (N = number of EDC Non-Processors with non-zero, non-NA responses).

Employee type	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Production	—	—	—	—	$6.01⁝	5	$10.68·	4	$10.91·	3	***	***	$13.10·	3	$15.63·	3
Non-production	—	—	—	—	$8.63⁝	5	$13.87⁝	5	$22.96⁝	3	***	***	***	***	***	***

Compensation per position for each EDC Non-Processor is calculated by dividing annual labor expenses (Section 4.2) by the average numbers of workers across months in the year. This assumes that the average number of workers is representative of the total number of positions that year. For non-production workers, it is assumed that the number of workers in the week containing March 12th is representative of the number of non-production employee positions in all weeks during the year.

Table 8.5: Compensation per position for EDC Non-Processors. Average compensation per position ($) (N = number of EDC Non-Processors with non-zero, non-NA responses).

Employee type	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Production	—	—	—	—	$11,866⁝	5	$14,639·	4	$15,527·	3	***	***	***	***	$21,394·	3
Non-production	—	—	—	—	$12,676·	5	$19,930⁝	5	$31,690·	3	***	***	***	***	***	***

9 Costs

This section of the report describes the cost data that are collected on the EDC first receiver and shorebased processor form for companies that report no processing activities. There were not enough responses to summarize fixed costs by category and maintain data confidentiality. Thus, fixed costs are only reported at an aggregated level (Table 16.1). Refer to Section 4 for more information on what comprises fixed costs and variable costs.

There are a variety of costs that are associated with running a first receiver or shorebased processing facility that are not requested on the EDC form. This is because it is difficult to determine the share of the costs associated with the facility. These expenses include trucks, and professional fees. In general, the EDC forms aim to collect costs that are directly related to facility maintenance and processing operations, and not costs that are related to activities or equipment beyond the facility (one exception is off-site product freezing and storage). For these reasons, the aggregated measures of costs reported here (variable costs, fixed costs and total costs) underestimate the true costs of operating a business.

9.1 Variable costs

Labor expenses

Table 9.1: Employment expenses for EDC Non-Processors. Total annual labor expenses for all employees (includes wages, bonuses, benefits, payroll taxes, and unemployment insurance) (thousands of $) (N = number of EDC Non-Processors with non-zero, non-NA responses).

Employee type	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Production	—	—	—	—	$145.3⁝	5	$176.3⁝	4	$139.0˙	3	***	***	$71.7˙	3	$156.9⁝	3
Non-production	—	—	—	—	$25.0⁝	5	$46.6⁝	5	$82.7˙	3	***	***	$45.5˙	3	***	***

Quota costs

Not enough EDC Non-Processors reported quota costs to display this information.

Other expenses

Utility expenses include electricity, natural gas, propane gas, water, and sewer, waste and byproduct disposal expenses.

Table 9.2: Other expenses for EDC Non-Processors. Other facility and operational expenses such as supplies, freight costs, insurance (including property, product and personal liability), non-fish ingredients (additives), offloading, monitoring, and taxes (property and excise) for EDC Non-Processors (thousands of $) (N = number of EDC Non-Processors with non-zero, non-NA responses).

Expense	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Cleaning and custodial supplies	—	—	—	—	$1.5⁝	4	$1.3⁝	6	$0.8⁝	4	$0.7⁝	3	$1.6⁝	3	***	***
Freight costs for supplies	—	—	—	—		0	***	***	$2.7⁝	3	***	***	***	***	***	***
Insurance	—	—	—	—	$4.2⁝	5	$15.1⁝	5	$27.0⁝	3	$6.1⁝	3	$9.6·	3	***	***
Licensing fees	—	—	—	—	$1.1⁝	8	$1.3⁝	8	$2.2⁝	5	$2.4⁝	5	$5.3⁝	4	$6.8⁝	3
Non-fish ingredients (additives)	—	—	—	—		0		0	***	***		0		0		0
Offloading	—	—	—	—	$11.4⁝	3	***	***	***	***	***	***	***	***		0
Packing materials	—	—	—	—	***	***	$23.7⁝	6	$35.2⁝	5	$8.3⁝	3	$14.4⁝	3	***	***
Production supplies	—	—	—	—	$0.8⁝	3	$0.9⁝	4	***	***	***	***	$3.9⁝	3	$4.3⁝	3
Shoreside monitoring	—	—	—	—	$0.4⁝	7	$1.6⁝	5	$3.3⁝	3	$2.6⁝	5	$1.1⁝	4	$4.5⁝	4
Taxes (property and excise)	—	—	—	—	$2.8⁝	5	$8.6⁝	5	$17.0⁝	3	$3.7⁝	3	$6.3⁝	3	***	***
Utilities	—	—	—	—	$12.3⁝	15	$12.1⁝	16	$9.1⁝	11	$7.7⁝	11	$5.6⁝	10	$5.8⁝	9

9.2 Fish purchases

The following tables describe fish purchases by EDC Non-Processors. There were not enough responses to summarize fish purchases for each species requested on the EDC form. Thus, fish purchase information for these companies is aggregated to the following five species groups: **groundfish (excluding sablefish and rockfish), sablefish, rockfish, crab, and other species.** There are no EDC Non-Processors that specialize in Pacific whiting.

Respondents are asked to provide the weight and cost of fish received during the survey year. This includes: 1) the weight of fish paid for; 2) the weight of those not paid for due to size or quality reasons; and 3) the weight of fish not paid for due to intra-company transfers.

The cost of fish from vessel or non-vessel sources includes the value of any taxes paid on behalf of delivering vessels. Purchase weight and cost information is requested by categories for different species types and sources. For catch share species, the fish source categories are: 1) Limited Entry (LE) Trawl; 2) LE Fixed Gear; 3) Other vessels; and 4) Non-vessel sources. For non-catch share species, the fish source categories are: 1) Vessel sources; and 2) Non-vessel sources. LE Trawl represents fish acquired directly from a vessel registered to a LE permit with a trawl endorsement and caught with either trawl or fixed gear. LE Fixed Gear represents fish acquired directly from a vessel with a fixed gear endorsement. This does not include fish caught with a fixed gear on a LE permit with a trawl endorsement, i.e., the gear switching provision of the catch share program, which are included under LE trawl. Other vessels are those without either a LE Trawl or LE Fixed Gear endorsement. Non-vessel sources include fish acquired from other entities, including other first receivers, processors, wholesale dealers, brokers, aquaculture producers, and transfers from outside the facility.

Fish that are not paid for are excluded from the tables in this section. This includes fish recorded as having no value due to size or quality reasons, as well as fish that are received for custom processing. The tables do include post season adjustments and fish purchased that are then custom processed by another processor outside the facility. As stated in the introduction to this report, respondents fill out the EDC form according to their fiscal year, so pounds listed for each species may not have been purchased during the calendar year indicated by the column header, and therefore these values may not align directly to state-fish ticket data.

9.3 Total cost and weight of fish purchases by source and species group

Table 9.3: Groundfish (excluding rockfish and sablefish): Total purchases by source for EDC Non-Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Groundfish (excluding rockfish and sablefish) (N = number of EDC Non-Processors with non-zero, non-NA responses).

Source	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
LE Trawl	—	—	—	—	—	—	105.7	153.8	4	370.7	182.9	4	***	***	***	***	***	***	***	***	***	***	***	***
LE Fixed Gear	—	—	—	—	—	—	***	***	***	***	***	***	0.0	0.0	0	0.0	0.0	0	***	***	***	***	***	***
Non-vessel	—	—	—	—	—	—	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	***	***	***	0.0	0.0	0
Other Vessel	—	—	—	—	—	—	***	***	***	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	***	***	***	***	***	***

Table 9.4: Rockfish: Total purchases by source for EDC Non-Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Rockfish (N = number of EDC Non-Processors with non-zero, non-NA responses).

Source	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
LE Trawl	—	—	—	—	—	—	107.2	63.3	4	108.7	56.8	4	***	***	***	19.9	15.0	3	***	***	***	***	***	***
LE Fixed Gear	—	—	—	—	—	—	***	***	***	***	***	***	0.0	0.0	0	0.0	0.0	0	***	***	***	***	***	***
Non-vessel	—	—	—	—	—	—	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	***	***	***	***	***	***
Other Vessel	—	—	—	—	—	—	***	***	***	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	***	***	***	***	***	***

Table 9.5: Sablefish: Total purchases by source for EDC Non-Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Sablefish (N = number of EDC Non-Processors with non-zero, non-NA responses).

Source	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
LE Trawl	—	—	—	—	—	—	***	***	***	13.6	11.0	3	***	***	***	***	***	***	***	***	***	***	***	***
LE Fixed Gear	—	—	—	—	—	—	82.7	120.1	3	***	***	***	***	***	***	0.0	0.0	0	***	***	***	0.0	0.0	0
Non-vessel	—	—	—	—	—	—	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	***	***	***
Other Vessel	—	—	—	—	—	—	***	***	***	***	***	***	0.0	0.0	0	0.0	0.0	0	***	***	***	61.4	219.8	3

Table 9.6: Crab: Total purchases by source for EDC Non-Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Crab (N = number of EDC Non-Processors with non-zero, non-NA responses).

Source	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
Vessel	—	—	—	—	—	—	994.1	2,367.9	4	670.7	2,027.6	4	873.8	2,867.2	5	***	***	***	111.2	587.5	3	2,092.4	7,493.9	4
Non-vessel	—	—	—	—	—	—	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	***	***	***	0.0	0.0	0

Table 9.7: Other: Total purchases by source for EDC Non-Processors. Total purchase weight (thousands of lbs) and cost (thousands of $) by source for Other (N = number of EDC Non-Processors with non-zero, non-NA responses).

Source	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
LE Trawl	—	—	—	—	—	—	0.0	0.0	0	***	***	***	***	***	***	***	***	***	***	***	***	7.8	4.5	3
LE Fixed Gear	—	—	—	—	—	—	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	***	***	***
Vessel	—	—	—	—	—	—	***	***	***	674.9	1,292.0	3	602.3	1,668.2	4	***	***	***	***	***	***	1,591.8	2,660.0	3
Non-vessel	—	—	—	—	—	—	***	***	***	***	***	***	0.0	0.0	0	0.0	0.0	0	***	***	***	***	***	***
Other Vessel	—	—	—	—	—	—	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	***	***	***	0.0	0.0	0

9.4 Average cost and weight of fish purchases by source and species group

Table 9.8: Groundfish (excluding rockfish and sablefish): Average purchases by source for EDC Non-Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Groundfish (excluding rockfish and sablefish) (N = number of EDC Non-Processors with non-zero, non-NA responses).

Source	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
LE Trawl	—	—	—	—	—	—	26⁝	38⁝	4	93⁝	46⁝	4	***	***	***	***	***	***	***	***	***	***	***	***
LE Fixed Gear	—	—	—	—	—	—	***	***	***	***	***	***			0			0	***	***	***	***	***	***
Non-vessel	—	—	—	—	—	—			0			0			0			0	***	***	***			0
Other Vessel	—	—	—	—	—	—	***	***	***			0			0			0	***	***	***	***	***	***

Table 9.9: Rockfish: Average purchases by source for EDC Non-Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Rockfish (N = number of EDC Non-Processors with non-zero, non-NA responses).

Source	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
LE Trawl	—	—	—	—	—	—	27⁝	16⁝	4	27⁝	11⁝	4	***	***	***	7⁝	5⁝	3	***	***	***	***	***	***
LE Fixed Gear	—	—	—	—	—	—	***	***	***	***	***	***			0			0	***	***	***	***	***	***
Non-vessel	—	—	—	—	—	—			0			0			0			0	***	***	***	***	***	***
Other Vessel	—	—	—	—	—	—	***	***	***			0			0			0	***	***	***	***	***	***

Table 9.10: Sablefish: Average purchases by source for EDC Non-Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Sablefish (N = number of EDC Non-Processors with non-zero, non-NA responses).

Source	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
LE Trawl	—	—	—	—	—	—	***	***	***	5·	4⁝	3	***	***	***	***	***	***	***	***	***	***	***	***
LE Fixed Gear	—	—	—	—	—	—	28⁝	40⁝	3	***	***	***	***	***	***			0	***	***	***			0
Non-vessel	—	—	—	—	—	—			0			0			0			0			0	***	***	***
Other Vessel	—	—	—	—	—	—	***	***	***	***	***	***			0			0	***	***	***	20⁝	73⁝	3

Table 9.11: Crab: Average purchases by source for EDC Non-Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Crab (N = number of EDC Non-Processors with non-zero, non-NA responses).

Source	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
Vessel	—	—	—	—	—	—	249⁝	592⁝	4	168⁝	507⁝	4	175⁝	573⁝	5	***	***	***	37⁝	196⁝	3	523⁝	1,873⁝	4
Non-vessel	—	—	—	—	—	—			0			0			0			0	***	***	***			0

Table 9.12: Other: Average purchases by source for EDC Non-Processors. Average purchase weight (thousands of lbs) and cost (thousands of $) by source for Other (N = number of EDC Non-Processors with non-zero, non-NA responses).

Source	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
LE Trawl	—	—	—	—	—	—			0	***	***	***	***	***	***	***	***	***	***	***	***	3⁝	2⁝	3
LE Fixed Gear	—	—	—	—	—	—			0			0			0			0			0	***	***	***
Vessel	—	—	—	—	—	—	***	***	***	225⁝	431⁝	3	151⁝	417⁝	4	***	***	***	***	***	***	531⁝	887⁝	3
Non-vessel	—	—	—	—	—	—	***	***	***	***	***	***			0			0	***	***	***	***	***	***
Other Vessel	—	—	—	—	—	—			0			0			0			0	***	***	***			0

10 Depreciation

Depreciation includes depreciation for all capital investments on buildings, and new and used machinery and equipment during the EDC data collection year for EDC Non-Processors (Table 10.1).

Table 10.1: Depreciation for EDC Non-Processors. Depreciation taken during the survey year (thousands of $) (N = number of EDC Non-Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Depreciation	—	—	—	—	$43.5	5	$48.6	4	***	***	***	***	***	***	***	***

11 Revenue

11.1 Revenue from offloading

There were not enough responses from EDC Non-Processors to report revenue from custom processing, offloading, or from the sale or lease of quota pounds or quota shares.

Table 11.1: Other revenue for EDC Non-Processors. Revenue from offloading (thousands of $) (N = number of EDC Non-Processors with non-zero, non-NA responses).

Revenue Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Offloading	—	—	—	—	$177	4	$160	5	***	***	***	***	$112	3	$171	3

11.2 Production activities

The following tables show production and sales for EDC Non-Processors. As these companies do not process fish, all production activities are listed under the product category Unprocessed. Refer to Section 6.2 for more details about production information collected by EDC forms.

11.3 Total value and weight of fish production by product type and species group

Table 11.2: Total production by species group for EDC Non-Processors. Total production value (thousands of $) and weight (thousands of lbs) by species group. Groundfish excludes rockfish and sablefish, and product type is unprocessed for all (N = number of EDC Non-Processors with non-zero, non-NA responses).

Product	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
Crab	—	—	—	—	—	—	994	2,755	4	***	***	***	874	3,293	5	***	***	***	132	812	3	2,091	8,171	4
Groundfish	—	—	—	—	—	—	155	218	7	371	202	5	***	***	***	***	***	***	***	***	***	***	***	***
Rockfish	—	—	—	—	—	—	117	155	7	***	***	***	***	***	***	20	26	3	29	40	4	52	38	3
Sablefish	—	—	—	—	—	—	277	762	6	81	159	6	***	***	***	***	***	***	144	357	4	285	751	4
Other	—	—	—	—	—	—	***	***	***	***	***	***	607	1,787	5	***	***	***	490	922	3	1,903	3,149	4

11.4 Average value and weight of fish production by product type and species

Table 11.3: Mean production by species group for EDC Non-Processors. Mean production value (thousands of $) and weight (thousands of lbs) by species group. Groundfish excludes rockfish and sablefish, and product type is unprocessed for all (N = number of EDC Non-Processors with non-zero, non-NA responses).

Product	2009			2010			2011			2012			2013			2014			2015			2016		
	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N	lbs	$	N
Crab	—	—	—	—	—	—	249⁝	689⁝	4	***	***	***	175⁝	659⁝	5	***	***	***	44⁝	271⁝	3	523⁝	2,043⁝	4
Groundfish	—	—	—	—	—	—	22⁝	31⁝	7	74⁝	40⁝	5	***	***	***	***	***	***	***	***	***	***	***	***
Rockfish	—	—	—	—	—	—	17⁝	22⁝	7	***	***	***	***	***	***	7⁝	9⁝	3	7⁝	10⁝	4	17⁝	13⁝	3
Sablefish	—	—	—	—	—	—	46⁝	127⁝	6	13⁝	27⁝	6	***	***	***	***	***	***	36⁝	89⁝	4	71⁝	188⁝	4
Other	—	—	—	—	—	—	***	***	***	***	***	***	121⁝	357⁝	5	***	***	***	163⁝	307⁝	3	476⁝	787⁝	4

First Receiver and Shorebased Processor Data Analysis

Although the data summaries above provide information about those entities with first receiver site licenses, in order to analyze the effect of the program on first receivers and shorebased processors, additional analysis is necessary. The following sections calculate species group level costs and subsequently, net revenue. The final section presents these measures as rates in order to better understand how changes observed are related to changes in annual catch limits and processing effort.

EDC Processors

12 Net Economic Benefits

The level of net benefits generated by fishery participants indicates whether an operation is a viable ongoing business, but there are numerous ways to calculate and assess net benefits depending on the data available, including *economic profit*[1] and *net revenue*. Economic profit is an indicator of the long-term viability of fishery operations since it encapsulates all costs, including the opportunity cost of non-cash inputs, and can be used to estimate whether there are incentives or disincentives to invest in capital or enter and leave the fishery. However, calculations of economic profit are beyond the scope of these reports because the EDC Program does not collect information on opportunity costs.

The EDC Program calculates a monetary, financial measure of a participant's net cash flow by subtracting monetary costs from gross revenue, which we call net revenue. The only costs that are included are those that are actually paid or associated with a financial transaction. Net revenue therefore measures the annual financial well-being of a participant's operation and can be used to assess how changes in fishery management may affect monetary gains or losses.

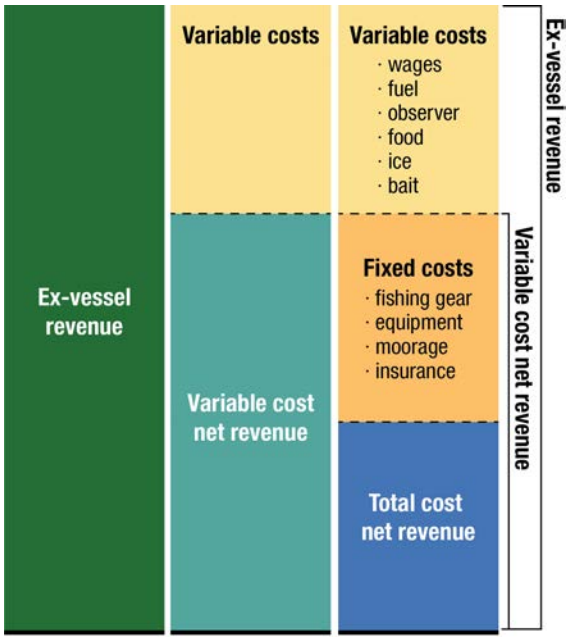


Figure 23: Composition and derivation of variable and total cost net revenue used in the EDC Program analysis of revenue, costs, and economic performance.

12.1 Net revenue

Net revenue is calculated two ways: using only variable costs, and using

[1] Whitmarsh D., James C., Pickering H., Neiland A. 2000. The profitability of marine commercial fisheries: a review of economic information needs with particular reference to the UK. Marine Policy, Vol. 24(3), pp. 257-263.

variable costs plus fixed costs (total costs).[2] The first calculation is called variable cost net revenue, while the second is called total cost net revenue (Figure 23). Variable cost net revenue is useful for examining changes in fishery operations that likely do not affect fixed costs. For example, the cost of processing an additional metric ton of fish is most representative of the true costs when only variable costs are considered. Total cost net revenue is generally a better measure of financial gain or loss for an entire year, season, or fishery.

There are two caveats associated with the net revenue calculations in this report. First, as noted in Section 4, there are certain costs associated with operating a processing facility that are not requested on the EDC form either because it is difficult to determine the share of the cost associated with the facility, because costs pertain to items used for activities other than processing fish, or are too difficult to allocate to a particular facility in a multi-facility company. These costs include office space, vehicles and transport trucks, storage of equipment, professional fees, and income taxes. Therefore, the net revenue presented here is likely an overestimate of true net revenue.

Second, the EDC forms do not collect information about financing costs of large purchases and investments. Instead of using principal and interest payment information in calculations of net revenue, we therefore must use the total costs associated with the purchases, repair, maintenance, or improvements. For example, if new equipment is purchased, the total cost of the equipment is used in the year that it was reported even though the actual cash outlay, if it were financed, would only be the principal and interest payments. It is likely that many larger capital costs, and perhaps some operating costs, are financed. This would mean that the actual cash outlays in a particular year for those items would be less than what is used in the EDC net revenue calculation. This may largely balance out over time because previously financed capital are also not included. Moreover, total cost net revenue is expected to be representative of actual total cost net revenue only when averaged over many years and across participants because relatively large capital costs only occur periodically.

12.2 Net revenue for all West Coast operations

Average net revenue is calculated for all companies that reported processing activity of groundfish in 2009 and 2010 and all companies that reported processing activity of any kind for 2011 onward (Table 12.1). Revenue does not include earnings related to lease and sale of quota. The variable and fixed costs do not include costs related to acquiring quota shares or quota pounds.

$$\text{Variable cost net revenue} = \text{Revenue} - \text{Variable costs}$$

$$\text{Total cost net revenue} = \text{Revenue} - (\text{Variable costs} + \text{Fixed costs})$$

[2] See Section 4 for a more complete discussion of variable and fixed costs used in this report.

Table 12.1: Average revenue, costs, and net revenue for EDC Processors. Revenue, variable costs, fixed costs, variable cost net revenue, and total cost net revenue for all West Coast operations (millions of $) (N = number of EDC Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Revenue	$13.6	19	$13.4	21	$16.6	24	$18.0	24	$20.6	23	$19.6	23	$18.1	22	$18.8	23
(Variable costs)	$10.5	19	$11.4	21	$13.6	24	$14.7	24	$17.3	23	$16.9	23	$15.6	22	$16.7	23
Variable cost net revenue	**$3.1**	**19**	**$2.1**	**21**	**$3.0**	**24**	**$3.3**	**24**	**$3.3**	**23**	**$2.7**	**23**	**$2.5**	**22**	**$2.1**	**23**
(Fixed costs)	$1.8	19	$1.8	21	$1.0	24	$0.8	24	$0.9	23	$1.1	23	$1.2	22	$1.3	23
Total cost net revenue	**$1.3**	**19**	**$0.3**	**21**	**$2.1**	**24**	**$2.5**	**24**	**$2.5**	**23**	**$1.6**	**23**	**$1.3**	**22**	**$0.9**	**23**

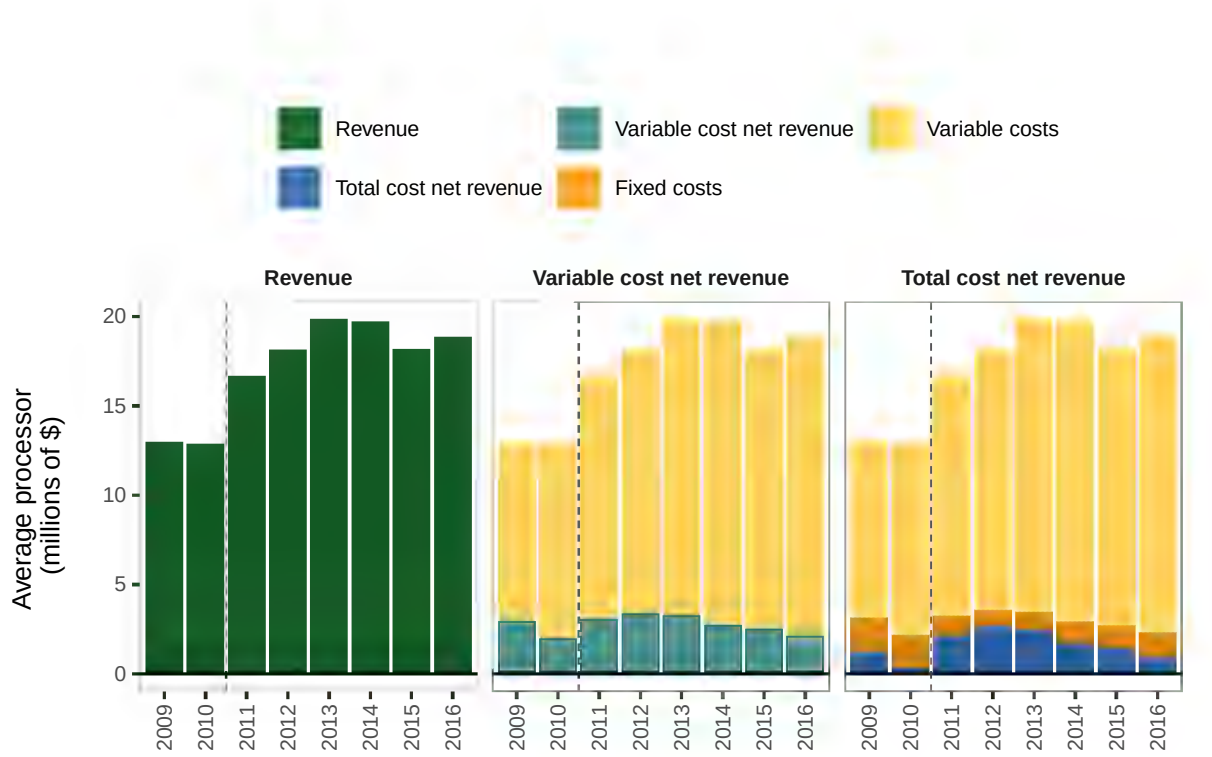


Figure 24: EDC Processor average total reported revenue (left), average variable cost net revenue (revenue minus variable costs) (middle), and average total cost net revenue (revenue minus variable costs and fixed costs) (right) for all West Coast operations (millions of $). Dashed line represents the beginning of the catch share program.

12.3 Total cost net revenue rates for all West Coast operations

The total cost net revenues calculated above in Section 12.2 are provided as rates to provide the total cost net revenue per pound of fish purchased and per pound of fish product produced (Table 12.2). The total weights used in these calculations exclude custom processing activities (see Sections 4.3 and 6.2). Additionally, the same rates are calculated for variable cost net revenue and the components that are used to calculate the two net revenue measures (revenue, variable costs, and fixed costs).

Table 12.2: Revenue, costs, and total and variable cost net revenue by pounds produced and pounds of fish purchased for EDC Processors (N = number of EDC Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Revenue per production pound	$2.13	19	$2.22	21	$3.95	24	$3.57	24	$4.05	23	$4.33	23	$4.76	22	$3.92	23
Revenue per purchase pound	$1.57	19	$1.60	21	$1.98	24	$1.90	24	$1.97	23	$2.38	23	$2.54	22	$2.71	23
Variable cost per production pound	$1.77	19	$1.99	21	$3.14	24	$3.03	24	$3.57	23	$3.79	23	$4.14	22	$3.61	23
Variable cost per purchase pound	$1.33	19	$1.42	21	$1.78	24	$1.72	24	$1.83	23	$2.23	23	$2.39	22	$2.51	23
Variable cost net revenue per production pound	$0.36	19	$0.23	21	$0.81	24	$0.54	24	$0.48	23	$0.55	23	$0.63	22	$0.32	23
Variable cost net revenue per purchase pound	$0.24	19	$0.18	21	$0.20	24	$0.17	24	$0.14	23	$0.15	23	$0.15	22	$0.20	23
Fixed cost per production pound	$0.22	19	$0.16	21	$0.22	24	$0.18	24	$0.18	23	$0.22	23	$0.31	22	$0.24	23
Fixed cost per purchase pound	$0.18	19	$0.11	21	$0.10	24	$0.09	24	$0.08	23	$0.11	23	$0.11	22	$0.13	23
Total cost net revenue per production pound	$0.14	19	$0.07	21	$0.59	24	$0.36	24	$0.30	23	$0.33	23	$0.32	22	$0.07	23
Total cost net revenue per purchase pound	$0.06	19	$0.07	21	$0.10	24	$0.08	24	$0.06	23	$0.04	23	$0.04	22	$0.07	23

12.4 Net revenue by species group

Net revenue measures are also broken out by species group.

Cost Disaggregation

In order to conduct economic analyses of specific fisheries, it is important to have costs broken out by fishery. However, processors participating in multiple fisheries incur costs that are aggregated across fisheries. These are called joint costs in the economics and accounting literature. They may include fixed costs (e.g., new processing equipment), or variable costs (e.g., ice). The former are joined by the nature of the costs, while the latter are joined due to observational limitations. It is difficult to assign fixed costs to a particular fishery because the level of the cost does not vary with processor participation (at least over the short term). Some variable costs can be tracked by fishery, but would be costly to do so. For example, although a processor could theoretically set up a system to track expenditures on supplies by fishery or species, doing so may be prohibitively costly.

We allocate costs using the "mixed" method, a combination of cost disaggregation by input weight, output weight, and value-added (value of fish sales less the cost of purchasing that fish) by cost category. See Appendix A for details. Some of the information on the EDC form for shorebased processors is collected at the species level (e.g. fish production information), not the fishery level like the catcher vessels. Therefore, we allocate costs to species groups rather than fisheries. The species groups considered in this analysis are 1) Shoreside Pacific whiting; 2) Non-whiting groundfish; and 3) Other.

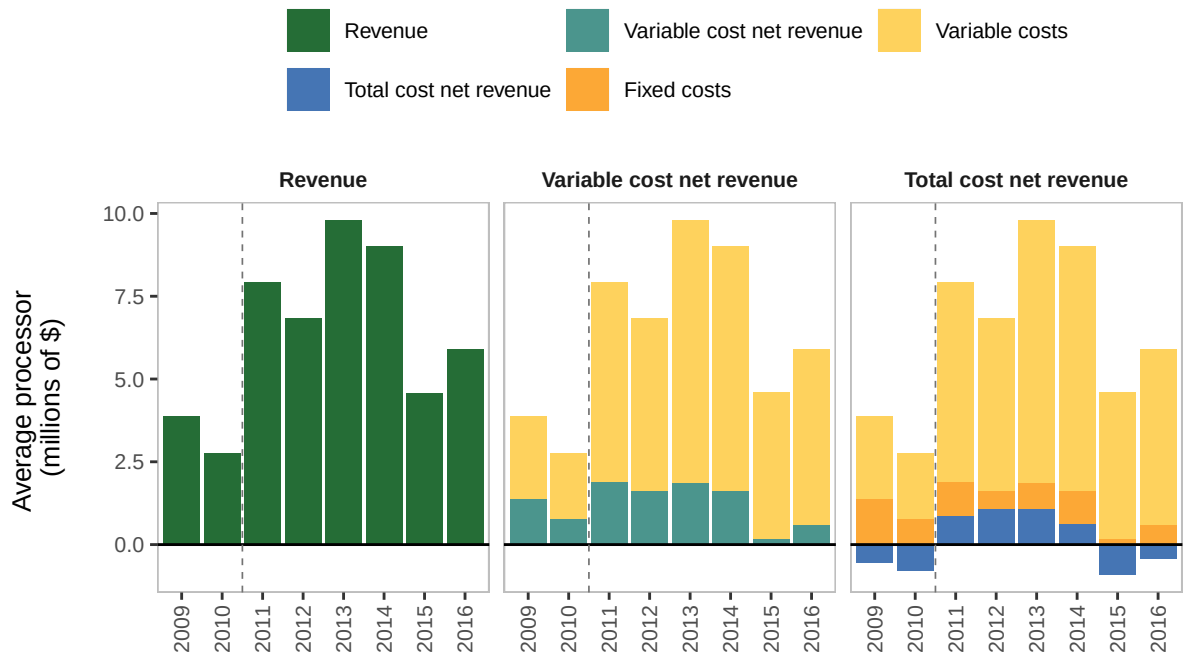


Figure 25: EDC Processor average total reported revenue (left), average variable cost net revenue (revenue minus variable costs) (middle), and average total cost net revenue (revenue minus variable costs and fixed costs) (right) for Pacific whiting operations (millions of $). Dashed line represents the beginning of the catch share program.

Table 12.3: Pacific whiting production: Average revenue, costs, and net revenue for EDC Processors. Average revenue, costs, and net revenue (millions of $). (N = number of EDC Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Revenue	$3.89	12	$2.76	12	$7.93	9	$6.84	8	$9.81	8	$9.00	8	$4.59	8	$5.91	8
(Variable costs)	$2.49	12	$1.97	12	$6.01	9	$5.20	8	$7.93	8	$7.37	8	$4.42	8	$5.30	8
Variable cost net revenue	**$1.40**	**12**	**$0.79**	**12**	**$1.92**	**9**	**$1.64**	**8**	**$1.88**	**8**	**$1.63**	**8**	**$0.17**	**8**	**$0.60**	**8**
(Fixed costs)	$1.94	12	$1.60	12	$1.05	9	$0.57	8	$0.79	8	$1.00	8	$1.08	8	$1.04	8
Total cost net revenue	**-$0.54**	**12**	**-$0.81**	**12**	**$0.87**	**9**	**$1.07**	**8**	**$1.09**	**8**	**$0.63**	**8**	**-$0.91**	**8**	**-$0.44**	**8**

Table 12.4: Non-whiting groundfish production: Average revenue, costs, and net revenue for EDC Processors. Average revenue, costs, and net revenue (millions of $). (N = number of EDC Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Revenue	$4.15	17	$3.66	19	$3.46	21	$3.70	20	$3.37	21	$3.26	21	$3.99	20	$4.19	19
(Variable costs)	$3.59	17	$3.08	19	$2.93	21	$3.14	20	$2.89	21	$2.81	21	$3.46	20	$3.90	19
Variable cost net revenue	**$0.56**	**17**	**$0.57**	**19**	**$0.53**	**21**	**$0.56**	**20**	**$0.48**	**21**	**$0.46**	**21**	**$0.54**	**20**	**$0.29**	**19**
(Fixed costs)	$0.15	17	$0.25	19	$0.13	20	$0.16	19	$0.15	20	$0.17	20	$0.19	19	$0.27	17
Total cost net revenue	**$0.41**	**17**	**$0.33**	**19**	**$0.40**	**21**	**$0.42**	**20**	**$0.34**	**21**	**$0.29**	**21**	**$0.36**	**20**	**$0.04**	**19**

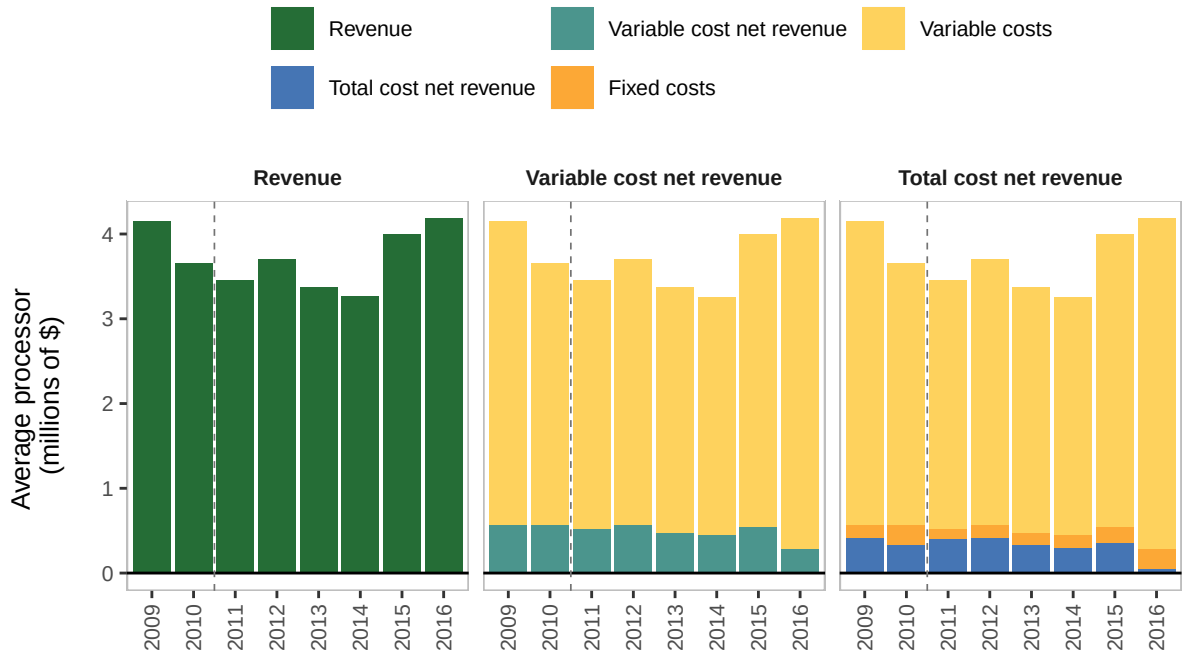


Figure 26: EDC Processor average total reported revenue (left), average variable cost net revenue (revenue minus variable costs) (middle), and average total cost net revenue (revenue minus variable costs and fixed costs) (right) for Non-whiting groundfish operations (millions of $). Dashed line represents the beginning of the catch share program.

Table 12.5: Other species production: Average revenue, costs, and net revenue for EDC Processors. Average revenue, costs, and net revenue (millions of $). (N = number of EDC Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Revenue	$7.45	19	$8.56	21	$10.59	24	$12.66	24	$14.15	23	$13.54	23	$12.81	22	$13.30	23
(Variable costs)	$5.56	19	$7.32	21	$8.67	24	$10.30	24	$11.64	23	$11.58	23	$10.62	22	$11.40	23
Variable cost net revenue	**$1.89**	**19**	**$1.24**	**21**	**$1.93**	**24**	**$2.36**	**24**	**$2.51**	**23**	**$1.96**	**23**	**$2.20**	**22**	**$1.90**	**23**
(Fixed costs)	$0.64	19	$0.77	21	$0.57	23	$0.54	24	$0.62	21	$0.72	22	$0.71	22	$0.81	23
Total cost net revenue	**$1.25**	**19**	**$0.47**	**21**	**$1.38**	**24**	**$1.83**	**24**	**$1.95**	**23**	**$1.26**	**23**	**$1.49**	**22**	**$1.09**	**23**

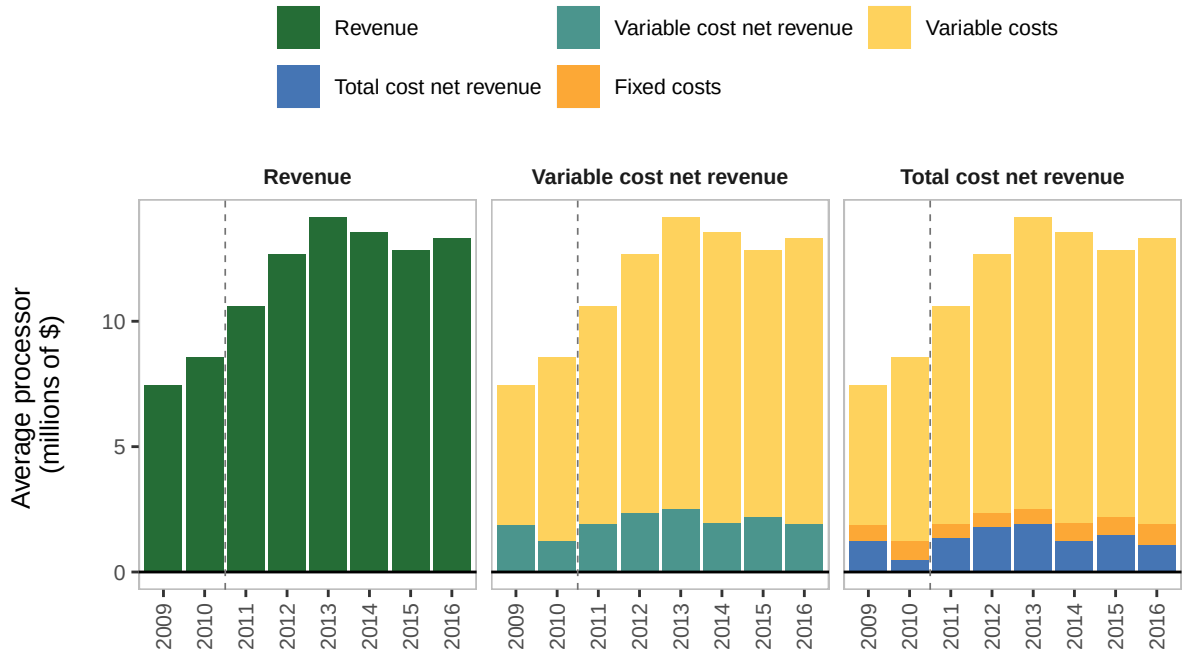


Figure 27: EDC Processor average total reported revenue (left), average variable cost net revenue (revenue minus variable costs) (middle), and average total cost net revenue (revenue minus variable costs and fixed costs) (right) for Other operations (millions of $). Dashed line represents the beginning of the catch share program.

13 Input Prices of Fish Purchases

13.1 Mean fish input price by source

The industry-wide average price of fish inputs by species e and source of fish s is

$$\frac{\sum_{n=1}^{N} C_{n,e,s}}{\sum_{n=1}^{N} WT_{n,e,s}^{fishinputs}} \quad \forall e, s$$

where C is the cost of fish inputs, $WT^{fishinputs}$ is the weight of fish inputs, and N is the total number of EDC Processors with non-zero, non-NA responses. The mean fish input price by species and source of fish is calculated for each survey year.

Table 13.1: Industry-wide average fish input price for EDC Processors: whiting, Dover sole, thornyheads, sablefish.

Species: Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Pacific whiting: LE Trawl	0.08	12	0.08	12	0.11	10	0.14	9	0.13	10	0.12	11	0.08	10	0.08	11
Pacific whiting: LE Fixed Gear	—	—	—	—	—	—	—	—	—	—	—	—	—	—	***	***
Pacific whiting: Other Vessel	—	—	—	—	***	***	***	***	***	***	***	***	***	***	***	***
Pacific whiting: Other	***	***	0.08	4	—	—	—	—	—	—	—	—	—	—	—	—
Pacific whiting: Non-vessel	—	—	—	—	***	***	0.17	3	***	***	***	***	***	***	***	***
Dover sole: LE Trawl	0.35	14	0.32	13	0.43	13	0.44	13	0.46	14	0.48	13	0.47	15	0.44	14
Dover sole: LE Fixed Gear	—	—	—	—	***	***	***	***	0.38	7	0.47	7	0.46	6	0.44	7
Dover sole: Fixed Gear	0.40	6	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Dover sole: Other Vessel	—	—	—	—	***	***	***	***	0.60	4	0.35	3	0.45	5	0.45	5
Dover sole: Other	***	***	0.40	4	—	—	—	—	—	—	—	—	—	—	—	—
Dover sole: Non-vessel	—	—	—	—	***	***	0.46	6	0.56	6	0.55	7	0.50	4	0.53	6
Sablefish: LE Trawl	2.09	15	2.19	16	2.99	15	2.38	17	2.10	16	2.66	16	2.66	18	2.82	18
Sablefish: LE Fixed Gear	—	—	—	—	3.88	12	3.28	11	2.71	12	3.31	12	3.85	13	3.97	10
Sablefish: Fixed Gear	3.04	10	3.18	12	—	—	—	—	—	—	—	—	—	—	—	—
Sablefish: Other Vessel	—	—	—	—	5.34	5	4.15	9	3.24	9	3.95	8	3.79	10	4.08	8
Sablefish: Other	2.40	4	2.11	5	—	—	—	—	—	—	—	—	—	—	—	—
Sablefish: Non-vessel	—	—	—	—	1.63	4	3.11	9	2.91	6	3.82	8	3.25	9	4.41	6
Thornyheads: LE Trawl	0.51	13	0.54	13	0.59	15	0.59	15	0.65	17	0.67	14	0.64	17	0.66	16
Thornyheads: LE Fixed Gear	—	—	—	—	1.02	8	1.69	10	2.55	8	1.63	9	***	***	2.21	10
Thornyheads: Fixed Gear	0.78	6	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Thornyheads: Other Vessel	—	—	—	—	0.86	4	0.79	7	2.96	5	1.18	5	0.60	5	0.73	6
Thornyheads: Other	***	***	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thornyheads: Non-vessel	—	—	—	—	***	***	0.55	3	0.54	4	0.65	5	0.57	4	0.51	5

Table 13.2: Industry-wide average fish input price for EDC Processors: other groundfish.

Species: Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Arrowtooth flounder: LE Trawl	—	—	—	—	0.10	11	0.12	13	0.11	11	0.11	11	0.10	11	0.10	9
Arrowtooth flounder: LE Fixed Gear	—	—	—	—	***	***	0.14	5	0.14	5	0.14	5	0.49	4	0.10	4
Arrowtooth flounder: Other Vessel	—	—	—	—	0.10	3	***	***	0.07	5	***	***	0.10	4	0.10	3
Arrowtooth flounder: Non-vessel	—	—	—	—	***	***	***	***	0.31	5	0.13	3	0.10	3	0.15	3
Lingcod: LE Trawl	0.64	15	0.68	14	0.78	17	0.75	17	0.75	17	0.79	17	1.02	16	1.03	16
Lingcod: LE Fixed Gear	—	—	—	—	0.89	6	0.79	6	1.54	10	1.94	8	1.51	10	1.44	10
Lingcod: Fixed Gear	0.83	7	0.83	6	—	—	—	—	—	—	—	—	—	—	—	—
Lingcod: Other Vessel	—	—	—	—	1.04	4	0.85	7	1.51	8	2.76	7	1.92	8	1.68	7
Lingcod: Other	1.27	3	1.17	5	—	—	—	—	—	—	—	—	—	—	—	—
Lingcod: Non-vessel	—	—	—	—	0.99	7	0.92	6	0.99	7	1.57	7	2.09	7	1.48	7
Rockfish: LE Trawl	0.69	18	0.52	15	0.54	18	0.56	17	0.55	19	0.53	18	0.49	17	0.46	18
Rockfish: LE Fixed Gear	—	—	—	—	0.98	8	1.07	10	1.04	9	1.55	10	1.40	12	1.38	11
Rockfish: Fixed Gear	0.66	6	0.83	9	—	—	—	—	—	—	—	—	—	—	—	—
Rockfish: Other Vessel	—	—	—	—	1.06	5	***	***	2.11	7	3.53	8	4.67	8	3.18	8
Rockfish: Other	***	***	0.72	5	—	—	—	—	—	—	—	—	—	—	—	—
Rockfish: Non-vessel	—	—	—	—	0.90	7	1.16	6	0.72	7	0.70	9	0.69	9	0.53	8
Sanddab: LE Trawl	—	—	—	—	0.58	7	0.59	8	0.58	9	0.57	10	0.57	9	0.57	10
Sanddab: LE Fixed Gear	—	—	—	—	—	—	—	—	—	—	—	—	***	***	***	***
Sanddab: Other Vessel	—	—	—	—	***	***	***	***	—	—	***	***	—	—	***	***
Sanddab: Non-vessel	—	—	—	—	2.50	4	0.79	5	1.08	7	0.99	5	1.94	4	***	***

Table 13.3: Industry-wide average fish input price for EDC Processors: other groundfish (cont.).

Species: Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
English sole: LE Trawl	0.31	11	0.32	11	0.48	9	0.36	13	0.34	13	0.38	13	0.35	12	0.39	12
English sole: LE Fixed Gear	—	—	—	—	—	—	—	—	—	—	—	—	***	***	***	***
English sole: Fixed Gear	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
English sole: Other Vessel	—	—	—	—	***	***	***	***	***	***	—	—	0.31	4	***	***
English sole: Other	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
English sole: Non-vessel	—	—	—	—	***	***	0.49	5	0.36	7	0.48	5	***	***	***	***
Petrale sole: LE Trawl	0.79	11	1.15	13	1.45	11	1.53	12	1.32	16	1.16	13	1.23	14	1.23	15
Petrale sole: LE Fixed Gear	—	—	—	—	***	***	***	***	1.22	5	0.94	5	***	***	1.44	6
Petrale sole: Fixed Gear	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Petrale sole: Other Vessel	—	—	—	—	1.42	3	***	***	***	***	0.84	3	1.22	6	***	***
Petrale sole: Other	1.27	4	1.74	3	—	—	—	—	—	—	—	—	—	—	—	—
Petrale sole: Non-vessel	—	—	—	—	1.79	5	1.58	5	1.37	6	1.28	7	1.44	6	1.49	5
Rex sole: LE Trawl	0.34	14	0.33	12	0.37	13	0.48	14	0.40	13	0.40	12	0.39	14	0.38	13
Rex sole: LE Fixed Gear	—	—	—	—	—	—	—	—	***	***	—	—	***	***	***	***
Rex sole: Fixed Gear	***	***	***	***	—	—	—	—	—	—	—	—	—	—	—	—
Rex sole: Other Vessel	—	—	—	—	0.36	3	***	***	0.47	4	—	—	0.40	4	0.40	3
Rex sole: Other	***	***	0.95	3	—	—	—	—	—	—	—	—	—	—	—	—
Rex sole: Non-vessel	—	—	—	—	1.76	4	0.43	4	0.44	7	0.42	5	0.41	3	0.32	3
Sharks, skates and rays: LE Trawl	0.20	12	0.26	11	0.31	12	0.41	13	0.40	13	0.42	12	0.45	12	0.39	11
Sharks, skates and rays: LE Fixed Gear	—	—	—	—	1.51	4	0.39	7	0.41	8	0.33	6	0.34	8	0.37	10
Sharks, skates and rays: Fixed Gear	0.22	6	0.27	3	—	—	—	—	—	—	—	—	—	—	—	—
Sharks, skates and rays: Other Vessel	—	—	—	—	0.62	6	0.33	6	0.22	6	0.45	6	0.90	7	0.68	5
Sharks, skates and rays: Other	***	***	0.85	3	—	—	—	—	—	—	—	—	—	—	—	—
Sharks, skates and rays: Non-vessel	—	—	—	—	1.33	4	0.46	6	0.57	6	0.71	8	0.54	5	0.57	5

Table 13.4: Industry-wide average fish input price for EDC Processors: non-groundfish.

Species: Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Coastal pelagics: All	0.11	9	0.11	8	—	—	—	—	—	—	—	—	—	—	—	—
Coastal pelagics: Vessel	—	—	—	—	0.12	11	0.10	9	0.11	8	0.18	7	0.14	7	0.08	5
Coastal pelagics: Non-vessel	—	—	—	—	1.47	7	0.16	5	0.31	5	***	***	***	***	0.33	6
Crab: All	1.83	15	1.86	18	—	—	—	—	—	—	—	—	—	—	—	—
Crab: Vessel	—	—	—	—	2.41	19	2.97	18	2.60	19	3.31	20	3.76	17	3.20	20
Crab: Non-vessel	—	—	—	—	2.54	8	2.92	11	3.05	9	3.76	9	5.75	10	4.37	11
Salmon: All	1.23	9	2.36	13	—	—	—	—	—	—	—	—	—	—	—	—
Salmon: Vessel	—	—	—	—	1.46	18	2.93	15	1.99	17	3.06	18	2.59	17	2.93	16
Salmon: Non-vessel	—	—	—	—	3.41	9	2.45	9	2.38	8	2.70	8	2.59	8	2.23	5
Shrimp: All	0.39	9	0.38	11	—	—	—	—	—	—	—	—	—	—	—	—
Shrimp: Vessel	—	—	—	—	0.49	9	0.51	11	0.52	11	0.58	11	0.77	14	0.71	14
Shrimp: Non-vessel	—	—	—	—	1.08	7	0.79	7	0.89	7	0.68	8	0.76	10	0.73	10
Tuna: All	1.05	10	1.24	14	—	—	—	—	—	—	—	—	—	—	—	—
Tuna: Vessel	—	—	—	—	1.98	17	1.54	16	1.61	16	1.24	13	1.17	12	1.82	11
Tuna: Non-vessel	—	—	—	—	2.42	5	***	***	3.06	5	1.98	6	1.96	6	2.16	7

Table 13.5: Industry-wide average fish input price for EDC Processors: non-groundfish (cont.).

Species: Source	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
California halibut: All	4.82	5	4.66	8	—	—	—	—	—	—	—	—	—	—	—	—
California halibut: Vessel	—	—	—	—	4.58	7	4.85	6	4.86	8	5.21	8	5.09	6	5.47	7
California halibut: Non-vessel	—	—	—	—	5.57	5	4.51	3	***	***	5.23	3	4.63	4	***	***
Other shellfish: All	2.83	4	2.97	4	—	—	—	—	—	—	—	—	—	—	—	—
Other shellfish: Non-vessel	—	—	—	—	2.59	6	2.18	4	2.87	5	3.15	5	3.42	5	4.00	4
Other shellfish: Vessel	—	—	—	—	—	—	***	***	***	***	***	***	***	***	3.40	4
Other species: All	0.17	14	0.24	14	—	—	—	—	—	—	—	—	—	—	—	—
Other species: Non-vessel	—	—	—	—	0.54	3	0.65	12	***	***	0.44	7	0.94	3	0.74	4
Other species: Vessel	—	—	—	—	0.54	14	***	***	0.86	10	0.56	11	0.63	9	1.58	11
Pacific halibut: All	4.68	6	6.96	8	—	—	—	—	—	—	—	—	—	—	—	—
Pacific halibut: Vessel	—	—	—	—	6.25	8	6.25	8	5.98	8	7.25	7	7.18	8	7.35	7
Pacific halibut: Non-vessel	—	—	—	—	9.39	5	6.13	5	6.63	4	4.75	5	7.20	6	7.53	4
Squid: All	0.97	6	0.75	9	—	—	—	—	—	—	—	—	—	—	—	—
Squid: Vessel	—	—	—	—	***	***	***	***	***	***	0.16	6	0.08	3	***	***
Squid: Non-vessel	—	—	—	—	1.49	5	0.80	3	0.81	3	0.77	7	0.47	4	0.91	5
Sturgeon: Vessel	—	—	—	—	2.59	4	2.49	4	3.30	3	***	***	—	—	—	—
Sturgeon: Non-vessel	—	—	—	—	2.89	5	3.57	5	3.97	3	3.29	3	3.67	3	***	***

14 Output Prices of Fish Products Produced

14.1 Mean fish output price by product type

The industry-wide average price of fish output by species e and product type o is

$$\frac{\sum_{n=1}^{N} R_{n,e,o}}{\sum_{n=1}^{N} WT_{n,e,o}^{fishoutputs}} \quad \forall e, o$$

where R is the revenue of fish outputs, $WT^{fishoutputs}$ is the weight of fish outputs, and N is the total number of EDC Processors with non-zero, non-NA responses. The mean output price of fish by species and source of fish is calculated for each survey year.

Table 14.1: Industry-wide average fish output price for EDC Processors: whiting, Dover sole, thornyheads, sablefish.

Species: Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Pacific whiting: Fillet	1.09	3	1.17	4	0.65	3	1.00	3	***	***	***	***	***	***	0.95	3
Pacific whiting: Frozen	***	***	0.33	4	0.29	6	0.53	6	0.25	9	0.30	6	0.29	6	0.22	6
Pacific whiting: Headed-and-gutted	0.56	10	0.56	10	0.56	9	0.65	8	0.50	8	0.51	8	0.37	7	0.43	7
Pacific whiting: Other	***	***	***	***	***	***	***	***	***	***	***	***	0.01	3	0.10	4
Pacific whiting: Surimi	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Pacific whiting: Unprocessed	***	***	0.11	3	***	***	***	***	***	***	***	***	***	***	0.06	4
Dover sole: Fresh	2.24	12	2.52	11	3.33	10	3.49	12	3.54	10	3.61	11	3.48	9	3.29	10
Dover sole: Frozen	2.15	10	1.57	11	2.66	11	2.51	10	2.01	10	3.52	9	2.73	9	2.22	9
Dover sole: Other	***	***	***	***	—	—	***	***	***	***	—	—	—	—	***	***
Dover sole: Unprocessed	0.52	5	0.69	7	0.74	8	0.42	8	0.48	6	0.57	6	0.49	9	0.44	7
Sablefish: Fresh	4.07	11	5.27	13	3.33	12	5.10	13	3.80	13	6.37	13	6.93	13	7.00	10
Sablefish: Frozen	4.91	11	5.38	13	7.16	12	5.56	13	4.83	14	5.55	12	5.83	10	6.68	11
Sablefish: Other	***	***	***	***	—	—	5.40	4	***	***	***	***	***	***	***	***
Sablefish: Unprocessed	2.81	3	2.88	5	4.04	9	2.64	7	2.40	11	2.84	11	3.10	11	3.10	13
Thornyheads: Fresh	1.20	5	1.17	6	1.88	3	***	***	***	***	2.95	7	2.20	4	2.94	5
Thornyheads: Frozen	2.35	7	2.22	7	3.41	8	3.64	9	3.03	10	3.14	9	3.11	9	2.81	10
Thornyheads: Other	—	—	***	***	***	***	***	***	—	—	—	—	—	—	***	***
Thornyheads: Unprocessed	1.23	3	0.97	5	1.50	10	1.59	9	1.36	9	1.75	7	1.99	11	1.56	12

Table 14.2: Industry-wide average fish output price for EDC Processors: other groundfish.

Species: Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Arrowtooth flounder: Fresh	—	—	—	—	1.12	8	1.05	9	1.18	9	1.18	8	1.20	6	1.19	6
Arrowtooth flounder: Frozen	—	—	—	—	***	***	0.87	9	0.71	9	1.11	9	1.13	8	1.04	6
Arrowtooth flounder: Other	—	—	—	—	—	—	***	***	—	—	—	—	—	—	—	—
Arrowtooth flounder: Unprocessed	—	—	—	—	***	***	0.14	3	0.17	4	***	***	***	***	0.14	7
Lingcod: Fresh	3.76	13	4.33	12	3.98	9	3.91	10	4.18	11	4.70	12	4.72	12	4.35	11
Lingcod: Frozen	5.95	5	2.03	5	3.43	6	3.51	6	2.81	7	2.19	7	2.29	8	3.26	7
Lingcod: Other	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Lingcod: Unprocessed	1.24	6	1.62	6	2.71	10	2.49	9	2.21	14	2.92	12	2.63	11	2.30	11
Rockfish: Fresh	2.70	16	2.77	15	2.82	12	3.15	11	3.22	12	2.94	13	2.93	13	2.61	11
Rockfish: Frozen	1.99	8	1.86	8	1.84	9	1.95	10	1.44	10	1.13	11	1.39	9	1.88	12
Rockfish: Other	***	***	—	—	1.79	3	***	***	***	***	***	***	***	***	1.34	4
Rockfish: Unprocessed	1.21	7	1.07	7	1.50	14	1.23	12	1.68	17	1.49	14	1.48	14	0.87	13
Sanddab: Fresh	—	—	—	—	***	***	5.15	6	5.12	7	4.06	7	3.84	6	2.91	6
Sanddab: Frozen	—	—	—	—	3.18	8	4.65	7	4.64	7	4.35	6	4.62	7	4.85	6
Sanddab: Other	—	—	—	—	***	***	***	***	***	***	***	***	***	***	***	***
Sanddab: Unprocessed	—	—	—	—	1.25	6	1.34	7	1.39	9	1.41	8	1.22	8	1.43	5
Sharks, skates and rays: Fresh	1.18	8	1.66	9	3.08	6	0.64	5	2.72	5	2.12	8	2.63	9	2.80	7
Sharks, skates and rays: Frozen	1.35	8	1.86	6	2.07	8	2.65	9	2.12	9	2.47	9	2.91	9	2.55	8
Sharks, skates and rays: Other	***	***	—	—	***	***	—	—	—	—	—	—	—	—	—	—
Sharks, skates and rays: Unprocessed	***	***	0.60	5	0.88	9	0.81	7	0.44	7	0.26	8	0.33	6	0.09	10

Table 14.3: Industry-wide average fish output price for EDC Processors: other groundfish (cont.).

Species: Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
English sole: Fresh	2.13	11	2.33	10	3.20	8	3.39	9	3.21	9	3.30	8	3.09	8	2.65	8
English sole: Frozen	1.21	6	1.08	4	2.44	5	1.10	8	1.52	9	1.40	9	0.94	8	0.84	7
English sole: Unprocessed	0.67	3	0.64	6	0.93	5	0.78	6	0.90	8	0.60	6	0.60	6	0.44	7
Petrale sole: Fresh	3.45	11	4.08	13	5.50	10	5.24	10	5.29	11	4.96	11	4.90	13	4.71	9
Petrale sole: Frozen	3.07	7	3.00	8	4.22	7	4.16	7	3.62	10	3.59	10	3.34	10	3.59	10
Petrale sole: Other	—	—	—	—	***	***	—	—	***	***	***	***	***	***	***	***
Petrale sole: Unprocessed	1.52	7	1.94	7	2.54	12	2.76	12	1.87	13	1.68	10	1.68	11	1.47	12
Rex sole: Fresh	1.63	11	2.01	8	2.15	9	2.48	8	1.98	9	2.03	7	1.95	8	1.91	7
Rex sole: Frozen	1.50	7	1.27	6	1.63	7	1.90	8	1.72	8	1.46	7	0.98	9	1.17	7
Rex sole: Other	—	—	***	***	—	—	***	***	—	—	***	***	***	***	***	***
Rex sole: Unprocessed	0.72	6	0.60	6	0.80	7	0.75	6	0.47	8	0.56	8	0.55	11	0.47	9

Table 14.4: Industry-wide average fish output price for EDC Processors: non-groundfish.

Species: Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Coastal pelagics: Canned	—	—	—	—	***	***	—	—	—	—	—	—	—	—	—	—
Coastal pelagics: Fresh	0.33	3	***	***	***	***	***	***	***	***	0.41	3	0.92	4	***	***
Coastal pelagics: Frozen	0.41	7	0.37	6	0.33	11	0.32	10	0.28	8	0.62	7	0.34	5	0.30	6
Coastal pelagics: Other	0.24	3	0.23	3	***	***	—	—	***	***	—	—	—	—	***	***
Coastal pelagics: Unprocessed	***	***	***	***	2.57	4	***	***	0.18	4	0.50	4	***	***	***	***
Crab: Canned	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Crab: Fresh	4.09	13	3.54	16	5.67	15	6.71	15	5.77	15	6.72	13	14.17	13	8.92	12
Crab: Frozen	4.98	13	4.24	15	5.73	17	6.45	16	6.22	16	7.56	14	7.20	13	7.19	15
Crab: Other	***	***	***	***	***	***	12.69	3	15.87	3	***	***	***	***	4.08	7
Crab: Unprocessed	2.23	5	2.24	4	3.90	8	3.62	9	3.60	11	4.52	14	4.86	11	3.93	13
Shrimp: Canned	—	—	—	—	***	***	***	***	***	***	***	***	***	***	***	***
Shrimp: Fresh	1.53	7	1.40	7	3.09	6	3.18	5	3.41	3	3.44	3	4.35	4	4.24	5
Shrimp: Frozen	2.83	7	1.96	9	3.00	11	2.97	12	2.84	12	2.34	14	2.10	15	3.48	11
Shrimp: Other	—	—	***	***	—	—	—	—	—	—	***	***	***	***	—	—
Shrimp: Unprocessed	***	***	***	***	2.00	4	***	***	***	***	0.72	6	0.59	6	1.02	7

Table 14.5: Industry-wide average fish output price for EDC Processors: non-groundfish (cont.).

Species: Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Salmon: Canned	***	***	***	***	***	***	***	***	***	***	***	***	—	—	—	—
Salmon: Fresh	3.46	7	4.35	11	4.30	14	5.34	10	5.53	10	4.47	12	5.81	11	7.09	7
Salmon: Frozen	***	***	2.87	9	2.14	13	2.59	11	2.49	14	3.73	13	***	***	***	***
Salmon: Other	***	***	***	***	—	—	—	—	***	***	***	***	***	***	***	***
Salmon: Smoked	***	***	***	***	9.33	3	***	***	***	***	***	***	***	***	***	***
Salmon: Unprocessed	3.48	3	5.24	4	4.77	9	6.28	9	7.19	11	6.88	13	5.99	13	9.43	11
Tuna: Canned	***	***	***	***	***	***	***	***	***	***	***	***	10.03	3	***	***
Tuna: Fresh	3.34	5	4.05	8	4.69	5	2.68	6	3.81	6	4.80	7	3.94	7	4.26	5
Tuna: Frozen	1.43	9	1.73	12	2.63	13	1.83	12	2.02	12	2.11	12	1.70	11	2.51	9
Tuna: Other	***	***	***	***	—	—	***	***	***	***	***	***	—	—	***	***
Tuna: Unprocessed	***	***	***	***	2.09	10	1.67	7	1.78	9	1.05	9	***	***	2.01	6

Table 14.6: Industry-wide average fish output price for EDC Processors: non-groundfish (cont.).

Species: Product	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
California halibut: Fresh	***	***	10.22	5	8.14	6	7.82	3	11.12	4	15.62	5	***	***	***	***
California halibut: Frozen	***	***	***	***	***	***	***	***	—	—	***	***	—	—	—	—
California halibut: Other	—	—	***	***	—	—	—	—	—	—	***	***	—	—	—	—
California halibut: Unprocessed	5.18	4	4.94	4	5.69	6	5.73	5	5.73	6	6.30	6	6.02	6	6.37	5
Other shellfish: Fresh	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Other shellfish: Frozen	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Other shellfish: Other	—	—	—	—	—	—	—	—	***	***	—	—	—	—	***	***
Other shellfish: Unprocessed	3.43	3	3.53	3	3.18	5	3.38	4	3.87	4	3.96	5	4.33	5	5.53	5
Other species: Other	0.89	10	0.42	10	0.55	12	2.40	11	1.59	13	1.96	12	2.05	13	***	***
Pacific halibut: Fresh	5.62	5	9.52	6	9.72	9	7.29	4	7.94	4	8.81	6	10.73	7	10.86	5
Pacific halibut: Frozen	6.63	4	8.83	4	9.96	4	7.78	5	7.32	5	***	***	8.50	4	8.22	4
Pacific halibut: Other	***	***	***	***	***	***	—	—	***	***	—	—	***	***	***	***
Pacific halibut: Unprocessed	***	***	***	***	7.66	5	6.35	5	6.41	5	7.57	5	7.77	6	8.14	4
Squid: Fresh	***	***	***	***	***	***	—	—	—	—	***	***	***	***	***	***
Squid: Frozen	1.69	5	1.05	6	1.85	7	1.06	3	1.69	3	1.01	7	0.72	4	***	***
Squid: Other	—	—	***	***	—	—	—	—	***	***	***	***	***	***	***	***
Squid: Unprocessed	***	***	—	—	2.88	3	***	***	***	***	1.52	4	***	***	***	***
Sturgeon: Fresh	4.65	4	5.02	4	5.72	6	6.38	5	6.73	5	7.07	3	7.24	3	***	***
Sturgeon: Frozen	***	***	4.25	3	***	***	***	***	***	***	***	***	***	***	***	***
Sturgeon: Other	***	***	—	—	—	—	—	—	***	***	—	—	—	—	—	—
Sturgeon: Unprocessed	—	—	—	—	***	***	***	***	***	***	***	***	***	***	—	—

15 Markup

The industry-wide average markup by species e is

$$\frac{\sum_{n=1}^{N} R_e}{\sum_{n=1}^{N} C_e} \quad \forall e$$

where R is the revenue of fish outputs, C is the cost of fish inputs, N is the total number of EDC Processors with non-zero, and non-NA responses. The average markup by species or species group is calculated for each survey year. The costs of fish include fish received from all sources. The fish purchases can include pre-processed product types. The production value includes production of unprocessed and processed products.

Table 15.1: Industry-wide average markup for EDC Processors. Average markup (total value of production divided by total cost of fish purchases by species). (N = number of EDC Processors with non-zero, non-NA responses).

Species	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Arrowtooth flounder	—	—	—	—	3.46	11	2.65	12	2.75	13	3.39	11	3.81	10	2.80	8
California halibut	1.27	5	1.84	7	1.13	8	1.20	7	1.14	8	1.47	8	1.24	6	1.32	5
Coastal pelagics	2.40	9	2.17	8	2.57	14	2.60	11	2.09	10	3.18	9	1.70	9	3.09	8
Crab	2.01	15	1.50	18	1.46	19	1.46	21	1.43	21	1.35	22	1.44	19	1.43	21
Dover sole	1.99	13	2.25	14	2.04	14	2.25	15	1.87	14	1.97	14	1.93	14	1.87	14
Echinoderms	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
English sole	2.12	11	1.87	13	2.29	11	2.51	13	2.27	14	1.74	12	2.13	12	1.38	12
Lingcod	2.02	15	2.20	16	2.19	18	2.25	18	2.07	20	2.06	20	1.74	19	1.75	18
Pacific halibut	1.49	6	1.08	8	1.11	11	1.00	8	1.07	9	1.12	9	1.10	10	1.10	9
Pacific herring	—	—	—	—	***	***	***	***	***	***	***	***	***	***	***	***
Pacific whiting	3.66	12	3.65	13	2.93	10	2.77	10	2.56	10	2.76	12	3.42	10	3.49	10
Petrale sole	1.95	11	1.40	15	1.45	14	1.45	15	1.43	17	1.58	15	1.48	18	1.48	15
Rex sole	2.41	12	2.31	12	2.27	11	2.20	14	2.26	15	2.33	11	2.22	14	2.08	12
Rockfish	1.54	18	1.46	19	1.56	22	1.51	19	1.60	21	1.57	20	1.73	20	1.64	20
Sablefish	1.34	16	1.55	18	1.29	20	1.33	20	1.36	21	1.29	19	1.38	19	1.37	20
Salmon	2.15	8	1.30	12	1.38	18	1.48	17	1.41	18	1.38	19	1.33	18	1.45	17
Sanddab	—	—	—	—	2.39	10	2.85	11	2.45	11	2.20	11	2.30	11	1.81	10
Sharks, skates and rays	2.74	12	2.35	13	3.06	15	2.36	15	1.90	14	1.74	16	2.30	15	2.09	14
Shrimp	2.34	9	1.70	11	2.00	12	2.06	14	2.06	13	1.99	15	1.87	18	1.88	14
Squid	1.26	5	1.28	8	1.28	8	1.04	4	***	***	1.00	8	1.60	5	2.99	9
Sturgeon	—	—	—	—	1.36	7	1.26	6	1.30	5	1.33	3	1.20	3	***	***
Thornyheads	1.76	13	2.04	14	2.51	16	2.60	16	2.09	16	2.16	15	2.11	17	1.88	17
Tuna	1.78	10	1.15	14	1.38	18	1.06	17	1.31	16	1.10	15	1.37	15	1.20	13
Other shellfish	1.30	4	1.32	4	1.45	6	1.71	5	1.33	6	1.29	6	1.28	6	1.31	7
Other species	2.69	10	1.27	10	1.57	12	1.65	11	1.71	9	1.23	12	2.65	9	2.36	14

EDC Non-Processors

16 Net Revenue and Economic Profit

Measures of net revenue earned by EDC Non-Processors are presented in this section. Refer to Section 12 for more details on the different measures of net revenue and several caveats concerning these measures.

16.1 Net revenue for all operations (catch share and non-catch share fish)

Average net revenue is calculated based on information from EDC Non-Processors for 2011 onward.

Revenue includes the total value of production and revenue from custom processing and offloading.

The variable and fixed costs do not include costs related to acquiring quota shares or quota pounds.

$$\text{Variable cost net revenue} = \text{Revenue} - \text{Variable costs}$$

$$\text{Total cost net revenue} = \text{Revenue} - (\text{Variable costs} + \text{Fixed costs})$$

Table 16.1: Revenue, costs, and net revenue for EDC Non-Processors. Average revenue, variable costs, fixed costs, variable cost net revenue, and total cost net revenue for all operations of non-processors on the West Coast (thousands of $) (N = number of EDC Non-Processors with non-zero, non-NA responses).

	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Revenue	—	—	—	—	$833.9	10	$665.1	9	$874.4	7	$732.2	5	$543.5	5	$3,497.8	4
(Variable costs)	—	—	—	—	$650.7	10	$637.4	9	$850.0	7	$606.3	5	$486.8	5	$3,302.3	4
Variable cost net revenue	**—**	**—**	**—**	**—**	**$183.2**	**10**	**$27.7**	**9**	**$28.5**	**6**	**$125.9**	**5**	**$56.7**	**5**	**$195.5**	**4**
(Fixed costs)	—	—	—	—	$73.2	7	$114.5	6	$28.0	4	$56.2	3	$44.1	3	$162.8	3
Total cost net revenue	**—**	**—**	**—**	**—**	**$141.3**	**9**	**-$73.2**	**7**	**$9.9**	**6**	**$97.5**	**4**	**$5.5**	**4**	**$55.5**	**3**

APPENDICES

Cost Disaggregation

It is important to conduct economic analyses of specific fisheries. Many vessels and processors that participate in the catch share program also participate in other fisheries. In order to perform analysis at the fishery level, costs must be broken out by fishery. However, EDC participants incur several types of costs that are aggregated across all fisheries. These are called "joint" costs in the economics and accounting literature and include fixed costs (e.g., new processing equipment), or variable costs (e.g., labor). The former are joined by the nature of the costs themselves, while the latter are often joined due to observational limitations. It is difficult to assign fixed costs to a particular fishery because the level of the cost does not vary with business activity (at least over the short run). Many variable costs can theoretically be tracked by fishery, but it would be difficult or costly to do so. For example, although an EDC participant could theoretically set up a system to track expenditures on supplies by fishery or species, doing so may be prohibitively costly.

In June 2013, the EDC Program presented research to the PFMC SSC (Agenda Item F.2.b[1]) regarding the selection of a method for cost disaggregation for catcher vessels relative to various criteria.[2] This document presents similar research for the first receiver and shorebased processor sector. Because this sector is quite different in many respects from the catcher vessel sector, there are some differences regarding approaches to cost disaggregation. First, much of the information on the EDC form for shorebased processors is collected at the species level (e.g., fish purchases and production information), not the fishery level like the catcher vessels. Therefore, we allocate costs to species groups rather than fisheries. Second, this means that analysis of catch share species includes all processing of that species, not just fish caught within the catch share program. This applies primarily to sablefish, which are caught in several other fisheries, but also to rockfish and other groundfish species. From 2009-2015, an average of 93% of groundfish pounds received by EDC Processors was caught with a trawl permit, which accounted for 80% of total fish purchase costs. While it would be ideal to isolate costs associated with the production of catch share groundfish only, there is not enough information to do so.

The first receiver and shorebased processor sector includes a wide variety of entities that range from

[1] http://www.pcouncil.org/resources/archives/briefing-books/june-2013-briefing-book/#groundfishJune2013.
[2] http://www.nwfsc.noaa.gov/research/divisions/fram/documents/EDC_Catcher_Vessel_Report_2015.pdf, p. 145.

independent catcher vessel owners who unload and truck their own fish to large multi-facility processing companies with a wide range of product offerings. Some respondents who provide information do not own a physical processing facility and thus do not incur many of the costs on the EDC form. Here we focus only on those companies that process fish.

1 Cost Disaggregation Methods

We allocate aggregated annual costs to three species groups: 1) Shoreside Pacific whiting; 2) Non-whiting groundfish; and 3) Other. Non-whiting groundfish include flatfish (e.g., petrale sole and Dover sole), roundfish (e.g., sablefish and lingcod), and rockfish. The third category "other" includes all other species reported on the EDC form.[3]

We analyze four methods of cost disaggregation: 1) disaggregation by input weight; 2) disaggregation by output weight; 3) disaggregation by value-added (value of fish sales less the cost of purchasing that fish); and 4) disaggregation by a combination of the other three methods by cost category ("mixed" method). Disaggregation by input weight compares the weight of fish purchases for a particular species group to all other fish purchases by the company in that year, and applies this ratio to all aggregated cost information on the EDC form. Disaggregation by output weight compares the weight of fish production for a particular species group to all other fish production by the company in that year, and applies this ratio to all aggregated cost information on the EDC form. Disaggregation by value-added compares the spread between production value and purchase cost for a given species group to overall spread for the company in that year, and applies this ratio to all aggregated cost information on the EDC form.[4] The "mixed" method, which follows the same general framework of cost allocation for the catcher vessel sector, applies the ratio from one of the aforementioned methods to each cost category (e.g., expenses on electricity, expenses on packing materials, etc.).

1.1 Mixed method

For some cost categories, we utilized economic theory and knowledge gained through discussions with industry to determine which cost disaggregation method to apply to each cost category (Table A.1).

For other costs, it was less clear which method was the most appropriate. To assist in determining which disaggregation measure to apply to these cost categories, we employed the following regression analysis to determine which cost disaggregation approach demonstrates the most meaningful correlation with the given cost category.

[3] Other species include coastal pelagics, crab, echinoderms, California halibut, Pacific halibut, herring, salmon, shrimp, squid, sturgeon, tuna, and other shellfish.

[4] We compute value-added at the species level and if value-added is negative, we replace it with zero. This is done at the species level prior to aggregation to the fishery level.

Table A.1: Mixed Method Cost Disaggregation Determination: Economic Theory.

Cost Category	Chosen Method
Capitalized Expenditures on buildings	Value-added
Capitalized expenditures on equipment	Value-added
Rent and lease on buildings and equipment	Value-added
Repair and maintenance	Value-added
Non-production employees	Value-added
Licensing fees	Value-added
Packing materials	Value-added
Processing equipment	Value-added
Production workers	Value-added
Shoreside monitoring	Input weight
Sewer, waste, byproduct disposal	Input weight
Offloading	Input weight

First, we compared the results of the following three regressions for each cost category and chose the method that yielded the lowest residual sum of squares. In the table below, we refer to this approach as Analysis 1. In the following equations, i denotes processor and t denotes year.

$$Cost_{it} = \beta^{InputWeight} * InputWeight_{it} + \epsilon_{it} \tag{A.1}$$

$$Cost_{it} = \beta^{OutputWeight} * OutputWeight_{it} + \epsilon_{it} \tag{A.2}$$

$$Cost_{it} = \beta^{ValueAdded} * ValueAdded_{it} + \epsilon_{it} \tag{A.3}$$

Second, we compared the results of the following three regressions for each cost category and chose the method that yielded the lowest residual sum of squares. Here the disaggregation variables on the right hand side of the equation are broken out by species group. In the table below, we refer to this approach as Analysis 2. In the following equations, i denotes processor, t denotes year and s denotes species group (Pacific whiting, Non-whiting groundfish, or Other).

$$Cost_{it} = \sum_{s} \beta_s^{InputWeight} * InputWeight_{its} + \epsilon_{it} \tag{A.4}$$

$$Cost_{it} = \sum_{s} \beta_s^{OutputWeight} * OutputWeight_{its} + \epsilon_{it} \tag{A.5}$$

$$Cost_{it} = \sum_{s} \beta_s^{ValueAdded} * ValueAdded_{its} + \epsilon_{it} \tag{A.6}$$

The two regression analyses recommended similar measures for disaggregation. In cases of discrepancies (nitrogen gas, non-fish ingredients, and off-site freezing and storage), the EDC Program chose to follow

Analysis 2.

Table A.2: Mixed Method Cost Disaggregation Determination: Regression Analysis.

Cost Category	Analysis 1	Analysis 2	Chosen Method
Cleaning supplies	Value-added	Value-added	Value-added
Communications & office supplies	Value-added	Value-added	Value-added
Electricity	Input weight	Input weight	Input weight
Freight	Value-added	Value-added	Value-added
Insurance	Value-added	Value-added	Value-added
Natural gas	Input weight	Input weight	Input weight
Nitrogen gas	Value-added	Output weight	Output weight
Non-fish ingredients (additives)	Input weight	Value-added	Value-added
Off-site freezing and storage	Input weight	Value-added	Value-added
Production supplies	Value-added	Value-added	Value-added
Propane	Value-added	Value-added	Value-added
Taxes	Output weight	Output weight	Output weight
Water	Value-added	Value-added	Value-added

Listed below are the variables used to disaggregate each cost category for the "mixed" method. For the average processor, 90% of total costs are allocated using the value-added method, 9% are allocated using input weight, and 1% are allocated using output weight.

- Costs were disaggregated using input weight for the following cost categories:
  - Shoreside monitoring costs
  - Electricity
  - Natural gas
  - Offloading expenses
  - Sewer, waste, and byproduct disposal
- Costs were disaggregated using output weight for the following cost categories:
  - Nitrogen gas
  - Taxes
- Costs were disaggregated using value-added for the following cost categories:
  - Capitalized expenditures on buildings
  - Capitalized expenditures on new and used machinery and equipment
  - Rental or lease of buildings, job-site trailers, and other structures

- Total repair and maintenance expenses
- Off-site freezing and storage
- Packing materials
- Processing equipment
- Non-production employees
- Insurance payments
- Freight
- Production supplies
- Cleaning and custodial supplies
- Communications and office supplies
- Non-fish ingredients (additives)
- Propane gas
- Water
- Licensing fees

While over 99% of processor revenue is generated from fish output (which is broken out by species on the EDC forms), some revenue information is collected for all operations (e.g., offloading and insurance settlements). We disaggregate this small portion of revenue using input weight.

Costs and revenue from custom processing activities are collected by species group on the EDC form. Therefore, these are applied directly to the relevant species group.

Table A.3: Sensitivity analysis. Shoreside Pacific whiting production average variable cost net revenue (VCNR) and total cost net revenue (TCNR) by cost disaggregation approach (thousands of $). N = number of EDC Processors with non-zero, non-NA responses. Standard deviations in parentheses (thousands of $).

Metric: Approach	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
VCNR: Input weight	$1,053	12	$346	12	$865	9	$1,077	8	$362	8	-$439	8	-$1,410	8	-$1,174	8
	($4,016)		($1,542)		($2,444)		($1,468)		($1,441)		($3,680)		($2,427)		($1,819)	(1)
VCNR: Output weight	$1,074	12	$642	12	$987	9	$1,105	8	$245	8	-$425	8	-$1,336	8	-$773	8
	($4,083)		($1,639)		($2,552)		($1,822)		($1,634)		($3,938)		($2,482)		($1,370)	(1)
VCNR: Value-added	$1,348	12	$763	12	$1,945	9	$1,628	8	$1,905	8	$1,716	8	$271	8	$716	8
	($3,585)		($1,388)		($1,880)		($1,173)		($1,943)		($2,232)		($1,493)		($1,377)	(1)
VCNR: Mixed method	$1,337	12	$732	12	$1,857	9	$1,587	8	$1,763	8	$1,527	8	$94	8	$515	8
	($3,643)		($1,403)		($1,907)		($1,186)		($1,873)		($2,354)		($1,556)		($1,268)	(1)
TCNR: Input weight	-$621	12	-$1,217	12	-$279	9	$449	8	-$584	8	-$1,838	8	-$2,868	8	-$2,766	8
	($1,153)		($1,940)		($2,629)		($1,216)		($1,401)		($3,855)		($2,928)		($1,740)	(1)
TCNR: Output weight	-$520	12	-$655	12	-$126	9	$495	8	-$702	8	-$1,790	8	-$2,719	8	-$2,204	8
	($1,140)		($1,340)		($2,713)		($1,666)		($1,693)		($4,222)		($2,867)		($1,178)	(1)
TCNR: Value-added	-$535	12	-$790	12	$956	9	$1,110	8	$1,192	8	$800	8	-$737	8	-$256	8
	($1,850)		($2,617)		($2,402)		($798)		($2,059)		($2,241)		($2,064)		($1,152)	(1)
TCNR: Mixed method	-$545	12	-$821	12	$868	9	$1,070	8	$1,050	8	$612	8	-$914	8	-$457	8
	($2,801)	(36)	($2,246)	(36)	($5,378)	(27)	($4,407)	(24)	($6,734)	(24)	($6,614)	(24)	($4,016)	(24)	($4,859)	(24)
	$3,515	2	$2,813	2	$3,692	2	$2,465	2	$4,174	2	$4,084	2	$2,453	2	$2,632	2

Table A.4: Sensitivity analysis. Non-whiting groundfish production average variable cost net revenue (VCNR) and total cost net revenue (TCNR) by cost disaggregation approach (thousands of $). N = number of EDC Processors with non-zero, non-NA responses. Standard deviations in parentheses (thousands of $).

Metric: Approach	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
VCNR: Input weight	$322	17	$787	19	$528	21	$568	20	$393	21	$365	21	$351	20	$165	19
	($1,312)		($1,355)		($981)		($1,176)		($1,363)		($1,013)		($1,063)		($847)	(1)
VCNR: Output weight	$521	17	$831	19	$611	21	$672	20	$500	21	$448	21	$468	20	$395	19
	($1,465)		($1,385)		($1,167)		($1,349)		($1,647)		($1,247)		($1,362)		($1,299)	(1)
VCNR: Value-added	$542	17	$492	19	$530	20	$589	19	$476	20	$386	20	$493	20	$283	17
	($1,601)		($1,181)		($890)		($931)		($1,130)		($1,003)		($1,000)		($757)	(1)
VCNR: Mixed method	$522	17	$520	19	$539	20	$591	19	$480	20	$393	20	$485	20	$289	17
	($1,580)		($1,179)		($907)		($952)		($1,165)		($995)		($1,013)		($770)	(1)
TCNR: Input weight	$136	17	$644	19	$424	21	$433	20	$261	21	$217	21	$174	20	-$77	19
	($1,305)		($1,195)		($883)		($1,091)		($1,279)		($856)		($943)		($718)	(1)
TCNR: Output weight	$380	17	$684	19	$518	21	$552	20	$381	21	$321	21	$302	20	$181	19
	($1,429)		($1,238)		($1,085)		($1,275)		($1,587)		($1,110)		($1,275)		($1,152)	(1)
TCNR: Value-added	$430	17	$294	19	$416	20	$448	19	$349	20	$225	20	$334	20	$29	17
	($1,557)		($1,023)		($772)		($803)		($978)		($881)		($836)		($582)	(1)
TCNR: Mixed method	$410	17	$322	19	$425	20	$450	19	$353	20	$232	20	$326	20	$35	17
	($1,535)		($1,009)		($788)		($822)		($1,014)		($863)		($852)		($587)	(1)

Table A.5: Sensitivity analysis. Other species production average variable cost net revenue (VCNR) and total cost net revenue (TCNR) by cost disaggregation approach (thousands of $). N = number of EDC Processors with non-zero, non-NA responses. Standard deviations in parentheses (thousands of $).

Metrics: Approach	2009		2010		2011		2012		2013		2014		2015		2016	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
VCNR: Input weight	$2,163	19	$1,153	21	$2,240	24	$2,473	24	$2,848	23	$2,505	23	$2,653	22	$2,386	23
	($3,093)		($3,303)		($2,746)		($2,461)		($4,667)		($4,307)		($6,466)		($3,397)	(1)
VCNR: Output weight	$1,972	19	$944	21	$2,122	24	$2,377	24	$2,792	23	$2,424	23	$2,519	22	$2,057	23
	($2,883)		($2,979)		($2,621)		($2,459)		($4,724)		($4,369)		($6,325)		($3,203)	(1)
VCNR: Value-added	$1,781	19	$1,182	21	$1,936	23	$2,305	24	$2,647	21	$1,833	22	$1,912	22	$1,656	23
	($2,631)		($2,679)		($2,184)		($2,254)		($3,672)		($3,534)		($5,459)		($2,703)	(1)
VCNR: Mixed method	$1,805	19	$1,174	21	$1,962	23	$2,317	24	$2,701	21	$1,897	22	$1,984	22	$1,727	23
	($2,658)		($2,730)		($2,218)		($2,269)		($3,749)		($3,571)		($5,525)		($2,757)	(1)
TCNR: Input weight	$1,541	19	$409	21	$1,791	24	$2,020	24	$2,416	23	$2,034	23	$2,183	22	$1,862	23
	($3,419)		($3,734)		($2,633)		($2,143)		($4,382)		($3,870)		($6,276)		($3,040)	(1)
TCNR: Output weight	$1,260	19	$52	21	$1,651	24	$1,906	24	$2,347	23	$1,923	23	$2,013	22	$1,454	23
	($3,287)		($3,699)		($2,507)		($2,156)		($4,453)		($3,958)		($6,138)		($2,925)	(1)
TCNR: Value-added	$1,224	19	$482	21	$1,411	23	$1,814	24	$2,089	21	$1,170	22	$1,263	22	$904	23
	($2,626)		($2,899)		($2,017)		($1,891)		($3,229)		($3,184)		($5,285)		($2,416)	(1)
TCNR: Mixed method	$1,249	19	$474	21	$1,437	23	$1,827	24	$2,144	21	$1,234	22	$1,335	22	$976	23
	($2,664)		($2,951)		($2,050)		($1,904)		($3,305)		($3,186)		($5,336)		($2,445)	(1)

Table A.6: Percent difference between methods for variable cost net revenue with mixed method as baseline.

Species Group	Year	Input weight (%)	Value-added (%)	Output weight (%)
Pacific whiting	2009	-21.20	0.80	-19.70
Pacific whiting	2010	-52.70	4.20	-12.30
Pacific whiting	2011	-53.40	4.70	-46.90
Pacific whiting	2012	-32.10	2.50	-30.40
Pacific whiting	2013	-79.40	8.10	-86.10
Pacific whiting	2014	-128.70	12.30	-127.80
Pacific whiting	2015	-1603.50	188.50	-1524.90
Pacific whiting	2016	-328.00	39.10	-250.30
Non-whiting groundfish	2009	-38.40	3.80	-0.20
Non-whiting groundfish	2010	51.30	-5.40	59.70
Non-whiting groundfish	2011	-2.20	-1.70	13.20
Non-whiting groundfish	2012	-3.90	-0.40	13.80
Non-whiting groundfish	2013	-18.10	-0.80	4.10
Non-whiting groundfish	2014	-7.10	-1.80	14.10
Non-whiting groundfish	2015	-27.70	1.60	-3.60
Non-whiting groundfish	2016	-42.90	-2.10	36.40
Other	2009	19.90	-1.30	9.20
Other	2010	-1.80	0.70	-19.60
Other	2011	14.20	-1.30	8.10
Other	2012	6.70	-0.60	2.60
Other	2013	5.40	-2.00	3.30
Other	2014	32.10	-3.40	27.80
Other	2015	33.70	-3.60	27.00
Other	2016	38.10	-4.20	19.10

Table A.7: Percent difference between methods for total cost net revenue with mixed method as baseline.

Year	Species Group	Input weight (%)	Value-added (%)	Output weight (%)
2009	Pacific whiting	-127.50	-123.70	-123.10
2010	Pacific whiting	-185.40	-155.40	-146.00
2011	Pacific whiting	-104.50	-84.70	-102.00
2012	Pacific whiting	-91.80	-79.70	-91.00
2013	Pacific whiting	-107.50	-84.70	-109.00
2014	Pacific whiting	-125.40	-88.90	-124.80
2015	Pacific whiting	-192.50	-123.80	-187.60
2016	Pacific whiting	-162.80	-105.80	-150.10
2009	Non-whiting groundfish	-66.70	4.80	-7.40
2010	Non-whiting groundfish	99.80	-8.70	112.40
2011	Non-whiting groundfish	-0.20	-2.20	21.80
2012	Non-whiting groundfish	-3.80	-0.50	22.60
2013	Non-whiting groundfish	-25.90	-1.10	8.10
2014	Non-whiting groundfish	-6.60	-3.00	38.10
2015	Non-whiting groundfish	-46.60	2.30	-7.40
2016	Non-whiting groundfish	-319.10	-17.10	415.60
2009	Other	23.50	-1.90	0.90
2010	Other	-13.60	1.60	-89.10
2011	Other	24.60	-1.80	14.90
2012	Other	10.60	-0.70	4.30
2013	Other	12.70	-2.60	9.50
2014	Other	64.90	-5.20	55.90
2015	Other	63.60	-5.30	50.80
2016	Other	90.80	-7.40	49.00

Table A.8: Shoreside Pacific whiting: Median variable and total cost net revenue (thousands of $).

Method_Measure	2009	2010	2011	2012	2013	2014	2015	2016
VCNR: Output weight	216.91	-66.82	-355.23	814.85	219.83	295.71	-281.33	-627.12
VCNR: Value-added	596.26	160.01	1,378.24	1,586.57	1,591.87	1,057.17	316.83	159.86
VCNR: Mixed method	515.67	93.33	1,125.92	1,505.34	1,551.48	763.26	303.07	-76.23
VCNR: Input weight	81.14	-113.47	-332.74	756.99	134.56	70.44	-443.55	-1,030.18
TCNR: Output weight	-137.08	-216.46	-702.95	460.71	-380.21	-389.22	-2,445.85	-2,285.59
TCNR: Value-added	45.93	-1.51	1,104.62	1,098.41	618.12	622.28	32.12	-394.86
TCNR: Mixed method	32.38	-9.97	852.31	1,015.13	577.73	334.02	-20.44	-482.86
TCNR: Input weight	-193.29	-424.67	-1,543.62	257.84	-624.23	-1,042.95	-2,693.04	-2,681.64

Table A.9: Non-whiting groundfish: Median variable and total cost net revenue (thousands of $).

Method_Measure	2009	2010	2011	2012	2013	2014	2015	2016
VCNR: Output weight	7.69	72.89	74.51	50.90	12.99	3.74	20.73	-23.16
VCNR: Value-added	54.53	42.98	39.62	71.08	53.19	30.26	7.82	41.15
VCNR: Mixed method	49.21	51.45	52.58	52.18	43.08	24.83	8.99	41.36
VCNR: Input weight	8.59	107.56	41.29	26.02	8.15	-1.09	55.79	-26.42
TCNR: Output weight	-4.42	62.19	21.20	15.52	7.41	-20.11	-21.13	-38.21
TCNR: Value-added	-0.54	-0.22	25.26	53.52	13.21	9.92	0.05	1.46
TCNR: Mixed method	-0.81	-0.95	22.03	39.36	16.80	8.89	-0.92	-0.57
TCNR: Input weight	-3.22	83.64	-0.54	12.83	4.30	-1.11	-3.68	-30.03

Table A.10: Other species: Median variable and total cost net revenue (thousands of $).

Method_Measure	2009	2010	2011	2012	2013	2014	2015	2016
VCNR: Output weight	1,156.35	470.69	923.62	1,888.38	1,147.25	684.32	516.28	483.05
VCNR: Value-added	838.46	423.14	774.28	2,009.76	1,132.18	297.68	355.21	483.05
VCNR: Mixed method	903.07	401.30	845.86	2,011.19	1,132.88	320.57	366.06	483.05
VCNR: Input weight	1,357.73	470.68	1,002.02	1,952.57	1,140.69	693.98	726.26	483.05
TCNR: Output weight	233.49	138.53	533.00	1,414.85	763.02	342.27	180.73	424.11
TCNR: Value-added	220.43	121.10	549.63	1,515.10	1,078.50	163.37	36.56	342.50
TCNR: Input weight	311.24	151.58	559.11	1,527.16	840.14	565.79	399.12	411.24
TCNR: Mixed method	220.76	158.21	551.31	1,518.77	1,079.19	186.21	65.68	342.50

2 Sensitivity Analysis

The cost disaggregation method chosen for economic analyses is the "mixed" method. There are several advantages to this method. First, it is reasonable to expect that the appropriate cost disaggregation method will vary across cost categories. Second, the regression analysis behind this method uses existing EDC Program data to help determine which method is likely the most appropriate, by examining which series of data (input weight, output weight, or value-added) is most correlated with data for each cost category across companies and years. Finally, this is the same approach used to disaggregate cost data for catcher vessels, which provides consistency across sectors.

We conducted a sensitivity analysis to understand the implications of choosing the "mixed" method over the other potential methods. The primary economic indicator employed by the EDC Program to compare across disaggregation methods is net revenue, both variable cost net revenue (VCNR, revenue minus variable costs) and total cost net revenue (TCNR, revenue minus variable costs and fixed costs). Figures 28-30 show company average TCNR across cost disaggregation methods. VCNR, while not explicitly shown, is represented by TCNR plus fixed costs. Tables A.3-A.5 show the mean and standard deviation of VCNR and TCNR generated by each disaggregation method. Each table compares disaggregation methods for one species group.[5] Tables A.6 and A.7 show the percent differences between the different methods, using the mixed method as the baseline method.

In general, disaggregating by input weight and output weight tends to allocate more of the costs of production to Pacific whiting, as it is a high volume fishery. Therefore, the net revenue from processing Pacific whiting is generally highest using the value-added method and lowest using the input weight method. The opposite is true for the Other species group, which includes high-value species like crab and shrimp. The relationship between methods over time is less consistent for production of non-whiting groundfish.

Pacific whiting production also has the largest differences across methods for both variable cost net revenue and total cost net revenue. Pacific whiting is the only species group where some cost disaggregation methods result in negative net revenue. Not surprisingly, differences between disaggregation methods are higher for total cost net revenue than variable cost net revenue, likely due to fixed costs being very large in scale.

It is also important to note the fairly large standard deviations for all measures. Within this sample of processors, there is a broad variety of business sizes and species processed, which can lead to wide distributions for measures of net revenue. Therefore, we also calculate the median VCNR and TCNR, which are lower in magnitude than the averages (Tables A.8-A.10). The input weight and output weight

[5] The number of processors is sometimes lower for the value-added method. If a processor makes zero or negative profits on a species group, this method will attribute no costs to production of that species, even if fish was produced. These situations generally describe fish that is unprocessed that was received as bycatch from vessels or fish that was offloaded for another company. Both cases would likely imply little processing costs on the part of the facility.

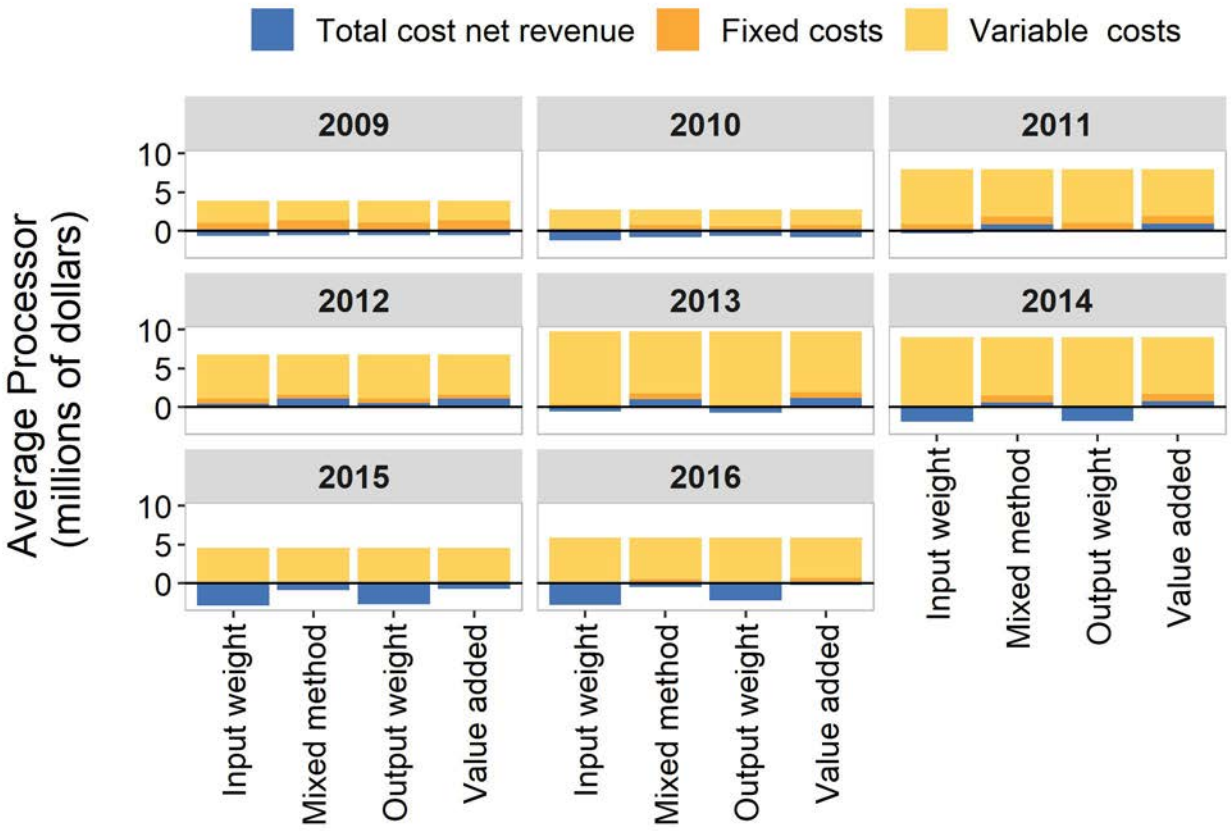


Figure 28: Average total cost net revenue (revenue minus variable costs and fixed costs) from Pacific whiting production by cost disaggregation method. N varies across year and metrics, see Table A.3 for N.

methods yield more negative values for VCNR, which also provides evidence in favor of the "mixed" method as we would expect companies to experience positive VCNR.

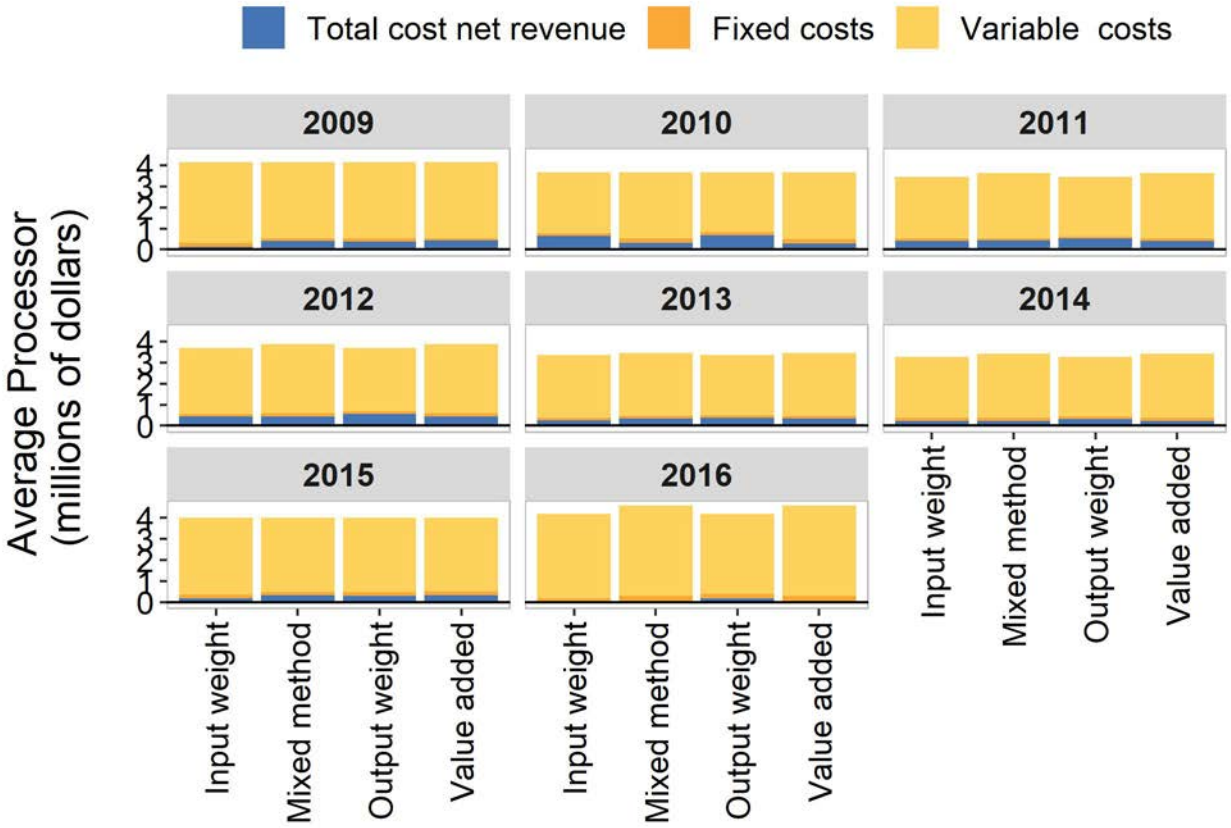


Figure 29: Average total cost net revenue (revenue minus variable costs and fixed costs) from non-whiting groundfish production by cost disaggregation method. N varies across year and metrics, see Table A.4 for N.

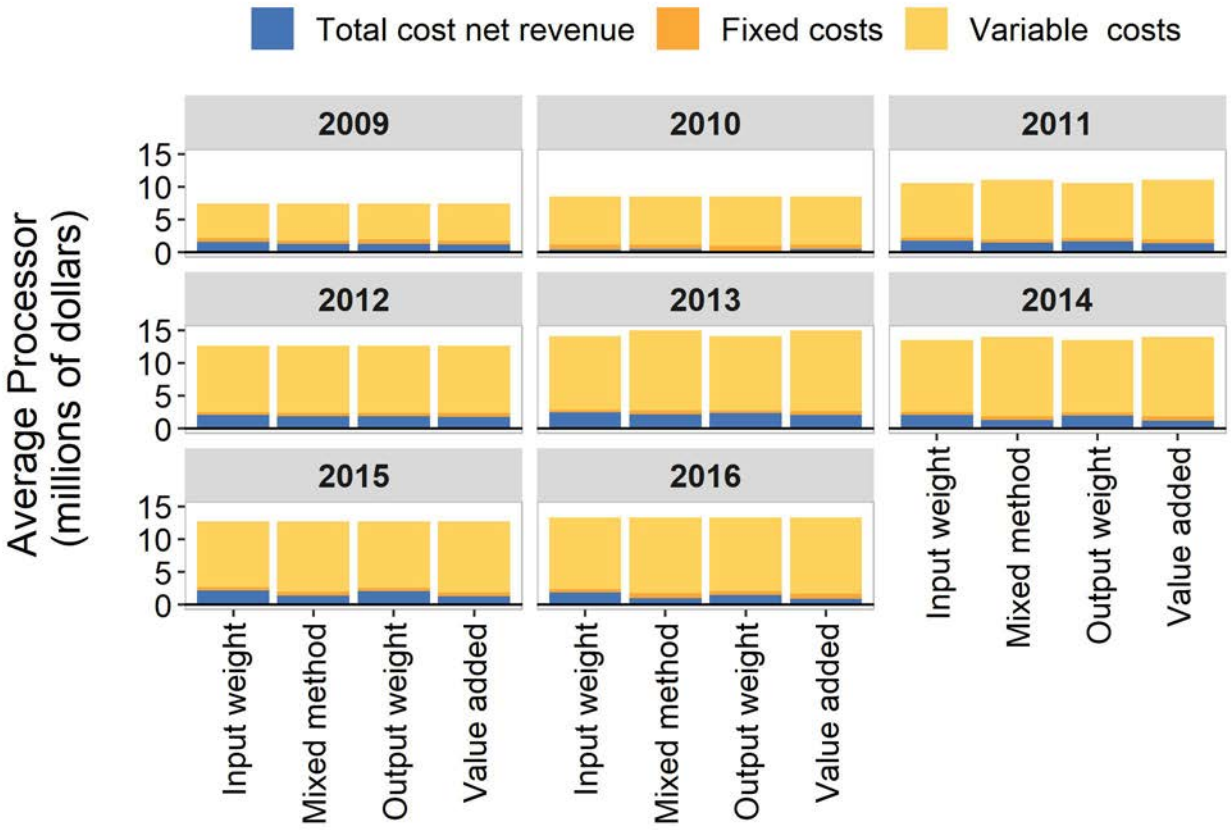


Figure 30: Average total cost net revenue (revenue minus variable costs and fixed costs) from other species production by cost disaggregation method. N varies across year and metrics, see Table A.5 for N.

IO-PAC Model

1 Revenue, Fish Costs, Markup, and Other Inputs

This appendix reports the EDC data for first receivers and shorebased processors that are used in the IO-PAC model.[1] All EDC respondents (Processors and Non-Processors) are included in the following tables. The average markup (Table B.3) for the IO-PAC model was calculated by dividing the total value of production (Table B.1) by the total cost of all fish put into production (Table B.2). The costs of fish include fish received from trawl vessel, fixed gear vessels, other vessel, and non-vessel sources. The fish purchased can include pre-processed product types. The production value includes production of unprocessed and processed products. In the tables below, the "N" represents the total number of first receivers who reported processing in 2009 and 2010, and the total number of first receivers that reported information in 2011 and onward (see Section Data Summaries 1.2).

[1] Leonard, J., and P. Watson. 2011. Description of the input-output model for Pacific Coast fisheries. U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-111, 64 p.

1.1 Total production revenue by IO-PAC species

Table B.1: Total value of fish production (millions of $) by IO-PAC species and number of EDC survey respondents.

Category	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
CPS	$13.4	14	$12.3	16	$13.7	16	$44.6	11	$26.7	11	$16.7	13	$1.2	12	$24.6	11
Crab	$77.3	16	$106.3	20	$105.1	23	$122.0	25	$134.7	26	$111.7	24	$78.7	22	$160.6	25
Dover and thornyhead	$22.2	15	$21.2	17	$18.1	22	$21.4	21	$22.3	18	$18.4	18	$17.3	19	$17.7	21
Halibut	$4.3	11	$3.3	16	$4.2	19	$4.8	16	$4.8	18	$5.9	16	$6.5	16	$7.7	15
HMS	$20.7	20	$21.5	22	$27.3	28	$30.2	25	$24.2	23	$18.2	21	$19.9	23	$23.9	21
Sablefish	$34.3	18	$39.1	20	$38.7	26	$31.5	26	$23.3	23	$26.1	22	$35.8	23	$39.9	24
Salmon	$13.0	9	$20.6	14	$27.9	20	$21.0	19	$44.2	20	$46.3	20	$25.9	20	$17.6	20
Shrimp	$29.0	10	$29.5	12	$59.1	13	$61.8	15	$65.0	13	$92.5	15	$125.0	18	$63.9	15
Whiting	$46.7	12	$33.1	13	$70.4	10	$53.9	11	$74.3	10	$71.4	12	$36.1	10	$46.6	10
Other groundfish	$18.0	21	$12.7	23	$18.1	30	$21.6	28	$23.2	25	$24.3	24	$29.0	25	$26.9	25

1.2 Total fish purchase cost by IO-PAC species

Table B.2: Total cost of fish purchases (millions of $) by IO-PAC species.

Category	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
CPS	$5.8	23	$5.9	25	$5.6	34	$19.9	34	$16.7	33	$5.6	28	$0.7	27	$8.2	28
Crab	$38.9	23	$72.6	25	$72.6	34	$83.9	34	$94.5	33	$83.3	28	$54.8	27	$114.4	28
Dover and thornyhead	$11.4	23	$9.7	25	$8.5	34	$9.4	34	$11.6	33	$9.1	28	$8.8	27	$9.9	28
Halibut	$3.0	23	$2.6	25	$3.7	34	$4.7	34	$4.5	33	$5.1	28	$5.8	27	$6.8	28
HMS	$11.4	23	$17.4	25	$18.2	34	$26.3	34	$17.9	33	$15.7	28	$12.7	27	$17.3	28
Sablefish	$25.8	23	$25.4	25	$30.1	34	$23.7	34	$17.0	33	$20.1	28	$26.3	27	$29.3	28
Salmon	$6.2	23	$16.0	25	$20.2	34	$14.3	34	$31.5	33	$33.7	28	$19.4	27	$12.2	28
Shrimp	$12.0	23	$16.2	25	$29.6	34	$30.0	34	$31.6	33	$46.4	28	$66.8	27	$34.2	28
Whiting	$12.7	23	$9.1	25	$24.0	34	$19.4	34	$29.0	33	$25.8	28	$10.6	27	$13.4	28
Other groundfish	$9.2	23	$8.9	25	$10.4	34	$13.2	34	$14.0	33	$15.2	28	$16.9	27	$15.9	28

1.3 Markup

Table B.3: Average industry markup by IO-PAC species.

Category	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
CPS	2.32	1	2.07	1	2.45	1	2.24	1	1.59	1	2.97	1	1.68	1	3.00	1
Crab	1.99	1	1.46	1	1.45	1	1.45	1	1.42	1	1.34	1	1.44	1	1.40	1
Dover and thornyhead	1.94	1	2.19	1	2.12	1	2.28	1	1.92	1	2.01	1	1.97	1	1.80	1
Halibut	1.45	1	1.28	1	1.14	1	1.02	1	1.09	1	1.17	1	1.12	1	1.13	1
HMS	1.82	1	1.24	1	1.50	1	1.15	1	1.35	1	1.15	1	1.56	1	1.38	1
Sablefish	1.33	1	1.54	1	1.29	1	1.33	1	1.36	1	1.30	1	1.36	1	1.36	1
Salmon	2.10	1	1.29	1	1.38	1	1.47	1	1.40	1	1.38	1	1.33	1	1.45	1
Shrimp	2.42	1	1.82	1	2.00	1	2.06	1	2.06	1	1.99	1	1.87	1	1.87	1
Whiting	3.66	1	3.65	1	2.93	1	2.77	1	2.56	1	2.76	1	3.42	1	3.49	1
Other groundfish	1.95	1	1.43	1	1.74	1	1.63	1	1.65	1	1.60	1	1.72	1	1.69	1

1.4 Other IO-PAC inputs

The IO-PAC model uses inputs from the following summary tables, which show the total value and number of respondents for each category. The "N" listed next to the totals reported by row represents the number of non-zero, non-NA responses for that category.

Table B.4: Total production employee hours.

	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
January	37,786	20	39,087	23	54,981	26	49,796	25	62,403	25	35,627	23	41,164	22	59,566	25
February	22,253	20	35,347	23	44,423	26	50,919	25	56,378	25	32,682	23	31,158	22	41,915	24
March	28,263	20	33,992	23	35,685	26	30,929	25	47,502	25	30,652	23	36,260	23	27,430	24
April	29,034	19	42,920	22	44,660	27	47,336	25	38,849	25	47,161	23	52,611	23	41,050	25
May	47,224	19	63,745	22	58,792	28	49,154	25	61,947	25	57,396	24	60,524	23	42,202	25
June	69,424	19	71,441	23	94,339	28	48,853	26	59,859	25	55,333	24	61,591	23	78,535	25
July	124,055	20	90,672	23	155,745	29	111,182	27	111,328	25	94,529	24	73,643	23	87,375	25
August	67,600	20	101,767	23	155,359	29	116,155	27	169,170	25	106,545	24	95,241	23	71,888	25
September	55,215	20	62,406	22	120,017	29	100,713	27	134,468	25	107,611	24	69,896	23	76,137	25
October	82,243	20	51,806	22	70,560	28	99,952	26	101,344	25	69,804	24	58,369	23	64,842	25
November	58,696	19	50,167	22	56,564	28	74,611	26	67,370	25	46,280	24	48,453	23	43,182	25
December	101,012	20	120,504	23	103,646	27	63,082	26	50,517	25	51,265	23	45,636	23	47,281	25

Table B.5: Total number of production employees.

	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
January	1,459	20	1,769	23	1,875	26	1,832	25	1,969	25	1,385	23	1,421	22	1,525	25
February	1,205	20	1,472	23	1,640	26	1,950	25	1,700	25	1,119	23	1,157	22	1,276	24
March	1,242	20	1,361	23	1,185	26	1,316	25	1,549	25	1,139	23	1,164	23	984	24
April	1,256	19	1,421	22	1,294	27	1,465	25	1,446	25	1,412	23	1,601	23	1,267	25
May	1,478	19	1,966	22	1,479	28	1,588	25	1,707	25	1,455	24	1,650	23	1,369	25
June	2,206	19	2,154	23	2,113	28	1,910	26	1,799	25	1,715	24	1,746	23	1,818	25
July	2,717	20	2,471	23	3,163	29	2,739	27	2,624	25	2,368	24	1,842	23	1,930	25
August	2,057	20	2,765	23	2,975	29	2,814	27	2,853	25	2,358	24	2,120	23	1,865	25
September	1,987	20	1,960	22	2,686	29	2,463	27	2,967	25	2,343	24	1,907	23	1,829	25
October	1,905	20	1,850	22	1,908	28	2,393	26	2,399	25	1,965	24	2,089	23	1,744	25
November	1,627	19	1,738	22	1,638	28	2,082	26	1,900	25	1,600	24	1,501	23	1,321	25
December	2,839	20	2,531	23	2,431	27	1,722	26	1,717	25	1,666	23	1,485	23	1,395	25

Table B.6: Total number of non-production employees and hours worked.

	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Employees	200	21	268	22	222	31	208	29	209	26	204	25	215	24	191	25
Hours	8,206	21	13,166	22	10,925	31	8,317	29	10,601	26	8,385	25	8,127	24	7,066	25

Table B.7: Total employee expenses (millions of $).

Employee Type	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Production	$34.0	21	$32.4	23	$47.1	29	$48.2	27	$54.9	25	$52.1	24	$49.5	24	$55.6	25
Non-production	$9.0	20	$10.4	22	$12.2	29	$13.5	29	$13.7	26	$16.2	25	$15.9	25	$14.0	25

Table B.8: Total capital expenditures and expenses on buildings and equipment (millions of $).

Category	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Buildings	$6.2	14	$6.7	13	$3.3	10	$2.5	16	$0.9	12	$2.3	14	$5.7	10	$4.1	12
New and used machinery and equipment	$22.0	21	$24.4	20	$10.4	22	$6.3	22	$7.4	21	$9.7	19	$7.5	17	$13.4	18
Processing equipment	$0.5	15	$0.6	17	$0.6	21	$0.8	16	$0.9	15	$1.0	16	$1.0	14	$1.4	16
Rental or lease of buildings, job-site trailers, and other structures	$2.6	22	$2.7	23	$3.2	26	$3.4	26	$4.3	24	$4.0	25	$4.3	23	$4.7	24
Repair and maintenance on facility buildings, machinery, and equipment	$5.1	22	$5.4	23	$6.2	30	$6.3	29	$7.0	26	$8.2	24	$7.1	24	$6.3	26

Table B.9: Total utility expenses (millions of $).

Category	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Electricity	$3.7	22	$4.0	23	$4.5	30	$5.1	28	$5.3	26	$5.4	25	$5.6	24	$5.7	24
Natural gas	$1.1	12	$1.0	12	$0.3	12	$0.3	10	$0.3	10	$0.3	10	$0.2	10	$0.2	10
Nitrogen gas	—	—	—	—	***	***	***	***	$0.6	3	$0.6	3	$0.6	3	***	***
Propane gas	$0.5	16	$0.9	19	$0.8	23	$0.7	23	$0.6	22	$0.6	20	$0.4	20	$0.4	20
Water	$1.5	22	$2.0	23	$2.4	27	$2.6	27	$3.0	24	$2.9	25	$2.9	24	$2.8	23
Sewer, waste, and byproduct disposal	$0.8	20	$0.9	20	$1.2	25	$1.4	22	$1.6	21	$1.6	21	$1.6	21	$1.2	21

Table B.10: Total other expenses (millions of $).

Category	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Cleaning and custodial supplies	—	—	—	—	$0.4	24	$0.5	26	$0.6	22	$0.7	22	$0.7	20	$0.6	20
Communications and office supplies	—	—	—	—	—	—	—	—	—	—	—	—	$0.9	25	$1.7	25
Freight costs for supplies	$1.7	10	$1.7	11	$1.5	8	$2.3	12	$3.8	14	$4.2	13	$5.1	19	$6.2	18
Insurance (property, product, and personal liability)	$3.0	20	$3.0	22	$1.9	29	$1.8	28	$2.3	25	$2.3	25	$2.3	25	$2.3	25
Licensing fees	—	—	—	—	$0.3	30	$0.3	31	$0.5	26	$0.4	28	$0.5	25	$0.5	26
Non-fish ingredients (additives)	$0.7	10	$0.7	11	$1.5	13	$2.6	14	$1.9	14	$2.5	13	$2.6	15	$2.3	15
Off-site product freezing and storage	$3.2	17	$3.8	18	$6.1	17	$8.3	18	$10.6	18	$9.7	19	$7.2	19	$11.8	19
Offloading	—	—	—	—	$0.8	16	$1.5	17	$1.8	13	$1.3	15	$0.9	16	$1.8	14
Packing materials	$13.3	22	$12.2	24	$13.2	29	$13.0	30	$13.5	27	$13.3	26	$10.4	25	$9.9	24
Production supplies	$2.3	19	$2.6	23	$1.4	26	$1.7	26	$2.1	22	$2.4	24	$2.0	24	$2.7	24
Shoreside monitoring	$0.2	12	$0.4	11	$0.1	22	$0.1	21	$0.3	21	$0.4	24	$0.6	22	$0.8	23
Taxes (property and excise)	—	—	—	—	$1.4	27	$1.5	27	$1.9	24	$1.6	25	$2.5	24	$3.0	26

Table B.11: Total weight (millions of lbs) and cost (millions of $) of custom processing.

	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Cost of custom processing of whiting	0.9	3	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Cost of custom processing of non-whiting groundfish	1.3	3	0.4	3	***	***	***	***	***	***	***	***	0.5	3	0.7	3
Cost of custom processing of other (non-whiting, non-groundfish)	1.4	3	1.3	4	0.9	4	0.6	4	0.8	3	0.7	4	0.9	5	0.7	5
Weight of custom processing of whiting	3.9	3	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Weight of custom processing of non-whiting groundfish	4.1	3	1.4	3	***	***	***	***	***	***	***	***	2.1	3	2.3	3
Weight of custom processing of other (non-whiting, non-groundfish)	6.2	3	5.6	4	3.0	3	0.3	3	4.5	3	***	***	1.6	5	***	***

Table B.12: Total other revenue (millions of $).

Other Revenue	2009		2010		2011		2012		2013		2014		2015		2016	
	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N	Total	N
Custom processing of whiting	***	***	***	***	***	***	$0.5	4	$0.5	4	***	***	***	***	—	—
Custom processing of non-whiting groundfish	***	***	$0.1	3	$0.7	5	$1.1	6	$1.4	5	***	***	***	***	***	***
Custom processing of other (non-whiting, non-groundfish)	$0.4	6	$0.5	7	$1.1	5	$1.6	6	—	—	—	—	—	—	—	—
Offloading	—	—	—	—	$1.9	13	$1.6	17	$1.6	15	$1.8	15	$1.1	16	$1.4	16